

# Porirua Scenic Reserve notable plants

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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 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.

# Adiantum diaphanum

# **Common Name(s):**

Tuberous maidenhair, Small maidenhair

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

Not Threatened

#### **Distribution:**

Indigenous. New Zealand: Kermadec (Raoul Island), North, South and Chatham Islands (common from Te Paki to the Waikato otherwise rather local reaching as far south as Dunedin). Also southern China, Japan, Taiwan, Vietnam. Malesia, Australia, Norfolk and Lord Howe Islands and the wider Pacific.

#### Habitat:

Coastal to lowland in closed or open forest. Often on clay banks, under overhangs, on rubble slopes or along rocky stream sides.

#### Features\*:

Tufted, terrestrial fern. Rhizomes erect, c.2 mm diameter; scales concolorous, golden brown, with entire margins and prominent apical seta. Roots and rootlets bearing ovoid proliferous tubers to c.1.5 mm long. Fronds tufted, adaxially dark green, abaxially paler, to 360 mm long. Stipe to 180 mm long, smooth adaxially, scabrous abaxially. Lamina 20-170 × 20-130 mm, 1-pinnate, or 2(-3)-pinnate at the base and 1-pinnate above, subpedate, hastate or deltoid, membranous; rachises flexuous, glossy, glabrous. Basal pinna, when present, 1 or 2 (rarely more), narrowly deltoid, 1-2-pinnate. Pinnules dimidiate, rectangular to subtrapeziform, becoming cuneate-flabellate in apical segments, abaxially sparsely to very sparsely setose or glabrous,



**Caption:** Great Mercury Island **Photographer:** John Smith-Dodsworth



**Caption:** Great Mercury Island **Photographer:** John Smith-Dodsworth

adaxially glabrous or setose hairy; distal margins shallowly lobed, denticulate when sterile; veins dark brown near stalk, otherwise pale. Sori 1-10 along distal margins, usually 1 per lobe; soral flaps round to subreniform, setose or glabrous, deeply immersed in the lobe. Spores c.64 per sporangium, yellow, perine scabrous; largest diameter (25.6-)33.9(-51.9) microns.

## Flowering:

Not applicable - spore producing

## Fruiting:

Not applicable - spore producing

#### **Threats:**

Not Threatened

# \*Attribution:

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

#### References and further reading:

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

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

#### For more information, visit:

# Adiantum fulvum

# **Common Name(s):**

Maidenhair

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

Not Threatened

#### **Distribution:**

Endemic. New Zealand: North, South, and Chatham Islands. From Te Paki south to the Taranaki and Hawkes Bay thence rather local reaching a southern limit on Banks Peninsula.

#### **Habitat:**

Coastal to lower montane in closed forest on clay banks, amongst boulders, along stream sides and in moderately open sites on the forest floor

## Features\*:

Tufted, terrestrial fern. Rhizomes short-creeping, c.1.5-2.0 mm diameter. Fronds spreading, dark green, concolorous, to 500 mm long. Stipe to 150 mm long, clad in short setose hairs. Lamina 150-350 × 100-250 mm, ovate to broadly ovate, 2-3-pinnate at base and 1-pinnate above; rachises flexuous, glossy, covered in short setose hairs. Pinnules attached by a short stalk on one corner, oblong to oblong falcate, curved acroscopically at apices, distal margins irregularly lobed, proximal margins smooth, adaxially glabrous, abaxially covered in sparse to dense short, setose hairs. Sori 1-7(-10) along distal margins, one per lobe; soral flaps subreniform to reniform, glabrous, ± immersed in the lobe.



**Caption:** Kennedy Bay **Photographer:** John Smith-Dodsworth



Caption: Kennedy Bay
Photographer: John SmithDodsworth

# Flowering:

Not applicable - spore producing

#### Fruiting:

Not applicable - spore producing

#### Threats:

Not Threatened but often rather uncommon over large parts of its range

#### \*Attribution:

Fact Sheet including description prepared for NZPCN by P.J. de Lange (Updated 4 May 2011).

#### 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:

# Adiantum viridescens

# **Common Name(s):**

Maidenhair

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

Not Threatened

#### Flowering:

Not applicable - spore producing

# Fruiting:

Not applicable - spore producing

# References and further reading:

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

# For more information, visit:

http://nzpcn.org.nz/flora\_details.asp?ID=1478



**Caption:** Tokatoka Hill. Jul 2006. **Photographer:** Jeremy Rolfe



**Caption:** Adiantum viridescens sori viewed from underside of frond.

Photographer: John Braggins

# Dendrobium cunninghamii

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

Winika, Pekapeka, Christmas Orchid, Bamboo Orchid

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

Not Threatened

# **Distribution:**

Endemic. North, South, Stewart and Chatham Islands

# **Habitat:**

Coastal to montane. Mostly epiphytic on forest tree trunks and branches, sometimes on fallen logs, and found as a also rupestral on rocks, cliff faces or banks. Occasionally colonising brick or concrete walls within urban areas.

#### Features\*:

Epiphytic or rupestral, rhizomatous, perennial forming discrete tufted patches up to 1.5 x 2.0 m. Rhizome suberect to ascending, similar to stems, producing numerous more or less branched roots. Stems canelike, long persistent, firm, wiry, and mostly slender, thickening towards base, up to 7 mm diameter, yellow-green, bright yellow to orange, glossy with obvious internodes and thickened nodes; unbranched in lower third, otherwise bearing numerous lateral, widely spreading, somewhat drooping branches. Leaf-sheaths tubular, minutely papillose, imbricating, covering younger stems; leaf lamina 30-50 x 3 mm, dark green, green to yellow-green darkened at junction with leaf-sheath, narrow-linear. Inflorescences 1-6-8-flowered, produced several nodes back from the active vegetative apex, usually as short, slender laterals; floral bracts inconspicuous, short, tubular; pedicel very slender, longer than ovary. Perianth 20-25(-30) mm diameter, glabrous, white (rarely cream), lip and column usually rose-pink, purplish to green. Sepals elliptic, spreading, apices more or less reflexed; lateral sepals fused under labellum and attached to column-base. Petals slightly broader. Labellum shorter, distinctly trilobed; lateral lobes small, often highly coloured, inclined to stand parallel to one another; mid-lobe white, broad, subacute, minutely crenulate; disc with 4-5 palecoloured, low, longitudinal ridges terminating just above short claw and near to a colourful knob-like nectary situated at the end of the columnfoot. Column about as long as its foot, cylindric, very narrowly winged. Capsules initially green, ovoid, maturing greyish-white, often striped with maroon or purple.



Caption: Pinehaven, Upper Hutt.

Photographer: Jeremy Rolfe



**Caption:** Rimutaka Forest Park. Feb 1998.

Photographer: Jeremy Rolfe

# Flowering:

Fruiting:

December - June

January - August

# **Threats:**

Not Threatened

# \*Attribution:

Fact Sheet prepared for NZPCN by P.J. de Lange 14 April 2007. Description adapted from Moore and Edgar (1997).

# References and further reading:

Adams, P.B. 2011: Systematics of Dendrobiinae (Orchidaceae), with special reference to Australian taxa. *Botanical Journal of the Linnean Society* 166: 105-126.

Burke, J.M.; Bayley M.J.; Adams, P.B.; Ladiges, P.Y. 2008: Molecular phylogenetic analysis of *Dendrobium* (Orchidaceae), with emphasis on the Australian section *Dendrocoryne*, and implications for generic classification. *Australian Systematic Botany 21*: 1-14.

Clements, M.A.; Jones, D.L.; Molloy, B. 1997: *Winika*, a new monotypic genus for the New Zealand orchid previously known as *Dendrobium cunninghamii* Lindl.. *The Orchadian* 12: 214-215.

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

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

# For more information, visit:

# Drymoanthus adversus

# **Common Name(s):**

Drymoanthus

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

Not Threatened

#### **Distribution:**

Endemic. North, South, Chatham Islands. Uncommon in the southern two thirds of the South Island where it is virtually replaced by D. flavus St George et Molloy.

# **Habitat:**

Coastal to montane. Epiphytic, rupestral or terrestrial. Mostly on the trunks and branches of shrubs and taller forest trees but also on rocks, cliff faces, banks and fallen, moss covered logs.

# Features\*:

Conspicuous tufted epiphyte of trunks and branches relatively clean of other epiphytic plants. Occasionally found on rock outcrops and cliff faces. Forming branched, leafy, tufts (40-)120(-150) mm diameter, with many white to brown, cord-like roots firmly attached to substrate. Lower parts covered in old leaf and inflorescence bases. Leaves (40-)60(-90) x 15-20(-30) mm, dark green, occasionally purple spotted, fleshy, elliptic, oblong, elliptic-oblong, with obtuse to emarginate, flat or twisted apices. Inflorescences racemose arising from or below the leaves, usually several per season; up to 80 mm long, bearing (1-)6(-20) flowers. Flowers at green or greenish-white, flecked with red, maroon or purple. Sepals and petals subequal, spreading widely but projecting forwards and inwards to form a cup.



Caption: Fruit. Bushy Park, Whanganui. Apr 2012. Photographer: Colin Ogle.



Caption: Fruit. Bushy Park, Whanganui. Apr 2012. Photographer: Colin Ogle.

Dorsal sepal  $3.5-4.5 \times 1.5-2.0 \text{ mm}$ , lateral sepals shorter, petals  $2.5-3.5 \times 1.5-1.8 \text{ mm}$ . Labellum  $2.5 \times 2.0 \text{ mm}$ , projected forwards, immobile, cupular, deeply channelled, mid-lobe evident only as a cucullate apex; lateral lobes forming sides of clog-shaped structure and each furnished with an internally projecting, partly transverse ridge, distal portion distinctly thickened, fleshy, bearing two prominent upright, flattened calli. Capsule  $20 \times 6 \text{ mm}$ , broadly cylindrical to fusiform, green, usually without spots.

# Flowering:

Fruiting:

September - January

November - May

#### **Threats:**

Not Threatened

#### \*Attribution:

Fact Sheet prepared by P.J. de Lange (1 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.

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:

# Gastrodia cunninghamii

# **Common Name(s):**

black orchid, perei

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

Not Threatened

#### **Distribution:**

Endemic. North, South, Stewart and Chatham Islands. Uncommon north of the Waikato.

#### **Habitat:**

Usually montane and mostly in beech (Nothofagus Blume) dominated forests. Often found in montane pine forest plantations. Sometimes found at lower altitudes in dark hollows within forest, especially in naturally cold sites.

#### Features\*:

Terrestrial, saprophytic, deciduous, fleshy, perennial herb lacking chlorophyll. Rhizome mycorrhizal, tuberous, rather swollen, shortlived, extensively branched, individual sections up to 250 x 50 mm, dull pale brown to brownish-black, often covered in chartaceous scales and scale-leaves, especially toward the active apex. Plant at flowering up to 1.4 m tall. Stem 4-10 mm diameter, dark brown to brown-black with lighter brown coloured, small spots, erect, stout or slender, rather brittle when fresh. Scale leaves widely spaced, chartaceous. Flowers up to 100, unscented, erect to pendulous (rarely with the flower touching the stem axis), tuberculate, tubercules paler in colour. Perianth 14-20 x 4-6 mm, brownish, brownish-black, or greenish; lobes slightly thickened toward margins. Lateral sepals fused slightly above the gibbous base but with their margins lying close together, often more or less overlapping. Labellum 10 x 4 mm, white or cream, membranous, not irritable, completely enclosed within floral tube (apex just visible), oblong, trilobed, base thickened, twisted and fused for most of length of perianth-tube, lateral-lobes with upturned, irregular, crenate-cristate, margins; mid-lobe yellowish with flat but irregular margins, bearing several long median, cristate, yellowish calli, apex black or brown. Column much shorter than labellum, wing minute, present as a more or less curved process; anther terminal, erect and bending forwards, short and broad, operculate, filament transversely pleated at the back, pollen breaking into angular granules; stigma basal, immediately below anther, broadly ellipsoid, hollow; rostellum flap-like, positioned under anther.



Caption: Grove Scenic Reserve Photographer: Melissa Hutchison



**Caption:** Grove Scenic Reserve **Photographer:** Melissa Hutchison

#### Flowering:

Fruiting:

October - March

December - May

# **Threats:**

Not Threatened

# \*Attribution:

Description adapted from Moore and Edgar (1970)

# References and further reading:

Given, D.R. 1959. An unusual occurrence of *Gastrodia cunninghamii* Hooker. Auckland Botanical Society Journal, 16: 3-4

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

NZPCN Gastrodia Key prepared by Jeremy Rolfe (pdf, 440K)

#### For more information, visit:

# Microsorum novae-zealandiae

# **Common Name(s):**

Mountain hounds tongue fern

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

Not Threatened

#### **Distribution:**

Endemic. North Island from about Maumaupaki (Camels Hump) and Table Mountain (Kauaeranga Valley) and Mt Karioi south to the southern Tararua Ranges.

#### **Habitat:**

An epiphytic species of montane to subalpine (600 - 1400 m a.s.l.) cloud forest and scrub. Very rarely found growing on rocks or logs on the forest floor.

#### Features\*:

Rhizomes long creeping, 5-10 mm diameter, covered in erect, orange-brown (rust-coloured) hyaline scales. Stipes 100-300 mm long, pale brown, wiry and pliant. Frond lamina pinnate, 100-1200 x 70-350 mm, dark green or yellow green, upper surface glossy, undersides dull and paler in colour, ovate, coriaceous, more or less glabrous. Pinnae in 3-30 pairs, 70-180 x 5-15 mm, long tapering to obtuse or subacute apices, bases adnate, margins smooth or undulose. Sori conspicuous, orange, positioned near margins of pinna.

## Flowering:

Not applicable - spore producing

# Fruiting:

Not applicable - spore producing

#### **Threats:**

Not Threatened. A fairly widespread endemic of upper montane and cloud forests. It can be locally very common.

# \*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (9 January 2005). Description adapted from Brownsey & Smith-Dodsworth (2000).

# References and further reading:

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

# For more information, visit:



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



**Caption:** Holdsworth, Tararua Forest Park. Feb 2008. **Photographer:** Jeremy Rolfe

# Pterostylis porrecta

# **Common Name(s):**

Shrimp-flowered Greenhood

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

At Risk - Naturally Uncommon

#### **Distribution:**

Endemic. North and South Islands.

#### Habitat:

Lowland to montane. Usually in deeply shaded, damp scrub and light forest. Also on ultramafic rock.

# Features\*:

Terrestrial tuberous herb growing in diffuse colonies. Sterile plants 20-50 mm tall, 3-4-leaved; leaves linear to linear-lanceolate, 40-70 x 4-6 mm, dark green, margins entire, apex acute to acuminate. Flowering plants 60-200 mm tall. Leaves 4-5, cauline, obliquely erect to spreading, sometimes arcuate; lamina linear-lanceolate, 45-120 x 4-6 mm, sessile, sheathing at the base; margins entire; apex acute to acuminate. Pedicel 10 mm long, slender. Ovary narrowly ellipsoid, 7-10 mm long, yellow-green, ribbed. Flower solitary, 18-22 mm long, semi-nodding, translucent white and pale green, darker towards the tip of the galea, the points of the sepals pale pink; galea shallowly gibbous at the base then leaning forwards before decurving in a shallow curve to the apex, the dorsal sepal much longer than the petals. Dorsal sepal ovate-lanceolate in outline when flattened, 19-22 x 9-11 mm, prominently expanded in the proximal third then gradually tapered to the acuminate apex. Lateral sepals obliquely erect top nearly horizontal, held well away from the galea, leaving a very wide lateral gap to the marginal petals; most of the labellum visible from the side through this gap; upper part of sinus flat when viewed from the side, sloping to a broad v when viewed from the front; internally the sinus projecting inwards as a small platform-like structure; conjoined part 7-9 x 5-6 mm wide at the top, narrowed to 1.6 mm wide at the base, the margins inrolled towards the apex and tapered into the free points, the free points 13-15 mm long, narrowly tapered to an attenuate apex, curved forwards, the tips often shallowly curved. Petals oblong-lanceolate, 16-19 x 3.0-3.5 mm, nearly straight, acute to acuminate, green with a white central area and two or three green stripes; flange vestigial. Labellum obliquely erect, shallowly curved forwards distally, the apex not protruding through the sinus in the set position; labellum hinge ligulate, 3 x 1 mm; lamina oblong, 8.0-9.0 x 2.3-2.5 mm, green to brownish green with a darker green central callus, apex obtuse, pinkish; callus 0.5 mm wide near the apex, raised; basal appendage 2.6-3.0 mm long, decurved, apex penicillate. Column 10-12 mm long, bent away from the ovary at about 50 degrees at the base then obliquely erect, green and white; column foot 3 mm long. Column-wings 4.5-5.0 mm long; basal lobe 2.0 x 0.7 mm, at an angle of 40 degrees, apex broadly obtuse, inner margins incurved, sparsely ciliate; mid-section 1.5 mm long, green; apical lobe 0.8 mm long, obtuse. Anther 1 mm long, shortly rostrate. Pollinia linear-clavate, 1.0-



**Caption:** Pterostylis porrecta **Photographer:** Ian St George



**Caption:** A photo of Pterostylis porrecta

Photographer: Ian St George

1.2 mm long, yellow, mealy. Stigma narrowly scutiform,  $5.0-5.5 \times 1.0-1.4$  mm, situated just below column-wings raised. Capsule subcylindrical to broadly ellipsoid,  $8-14 \times 4-6$  mm, initially yellow-green maturing grey.

# Flowering:

## Fruiting:

November - January

January - March

#### **Threats:**

A biologically sparse species, known from widely scattered sites. It is possibly threatened by plant collectors.

#### \*Attribution:

Fact Sheet prepared for NZPCN by P.J. de Lange 14 April 2007: Description based on Jones et al. (1997).

# References and further reading:

Jones, D.L.; Molloy, B.P.J.; Clements, M.A. 1997: Six new species of *Pterostylis* R.Br. (Orchidaceae) from New Zealand. *The Orchadian* 12: 266-281.

# For more information, visit:

# Streblus banksii

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

Large-leaved milk tree, turepo

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

At Risk - Relict

#### **Distribution:**

Endemic. New Zealand: North and South Islands. In the North Island mainly easterly from about Kaitaia to East Cape, Waikato and northern Hawkes Bay, including islands of the Hauraki Gulf, thence somewhat disjunct reappearing in the Horowhenua to Wellington and the western side of the Wairarapa. Confined to the northern South Island where populations are known from the Marlborough Sounds (mainly islands), Abel Tasman National Park, and also the eastern Golden Bay.

# **Habitat:**

Coastal and lowland forests (0-200 m a.s.l.), preferring deep, fertile soils, large trees are often found on alluvial terraces. On offshore islands it seems more able to tolerate drier conditions and skeletal soils and may at times be found on steep cliff faces, rock ledges, or as stunted shrubs on cobble/boulder beaches.

#### Features\*:

Dioecious, robust tree or large shrub (depending on growing conditions) up to 12 m tall, usually with a broad canopy crown; trunk up to 0.8 m d.b.h., bark dark brown. Branches ascending at first then widely spreading; branchlets somewhat flexuous, wiry and pliant, initially puberulent and very lenticellate, later glabrate. Leaves of juvenile plants variable 20-60 x 10-30 mm, dark green above, paler beneath, elliptic-oblong, margins finely to deeply crenate, usually deeply lobed, pandurate, sinus obtuse; petioles up to 8 mm long. Leaves of adults 35-85 x 20-35 mm, dark green to yellow green, paler beneath, ovate to broadly ovate, ovate-elliptic, obtuse to subacute, margins crenate (very rarely lobed), petioles stout up to 10 mm long. Inflorescences axillary or terminal, spicate, solitary, paired or in threes: staminate up to 30 mm long, densely flowered, flowers rather densely close-set, almost imbricating, grey-green, perianth 4-partite, segments obtuse to rounded; pistillate similar, up to 25 mm long, flowers widely spaced, distichously arranged. Fruits up to 65 mm diameter, drupaceous, broad-ovoid, fleshy, flesh red.

# Flowering:

Fruiting:

August - October

October - April

#### **Threats:**

It would appear that this species may once have been quite widespread. However, its current distribution is typically sparse and it is rarely common anywhere except on rodent-free offshore islands in the Hauraki Gulf and off the eastern Coromandel Peninsula. In

mainland areas and on rodent infested islands plants are damaged by possum and goat browsing, and also by rodents which avidly eat the fruit, seed and emerging seedlings. In remnants being dioecious sex imbalance can be an issue. Successful island rodent eradication's have allowed this species to restablish itself. It certainly responds rapidly to rodent removal.



Fact sheet prepared for NZPCN by P.J. de Lange January 2005. Description adapted from Allan (1961).

# References and further reading:

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

Mitcalfe, B., Horne, C. 2002. Large-leaved milk tree, ewekuri, in the Wellington Region. Wellington Botanical Society Bulletin, 48: 41-43





Caption: Photo by Bec Stanley



Caption: Photo by Bec Stanley