



BCA Pest 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 as well as non-vascular plants and fungi.

Funding to develop the website was provided by the New Zealand Government's Terrestrial and Freshwater Biodiversity Information System Programme (TFBIS). The website is run by a team of volunteers and is continually improving in both the richness of content and the range of functions it offers.

The species information used on the website has come from a variety of sources which are cited at the bottom of a species page.

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 John Barkla, Cathy Jones, Simon Walls, Nick Singers, Mike Thorsen and many others. The threatened fungi text was written by Eric Mackenzie and Peter Buchanan (Landcare Research) and aquatic plant information was supplied by Paul Champion from NIWA. Colin Ogle has contributed to the exotic species fact sheets.

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, Mike Thorse, Colin Ogle and John Sawyer.

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
- Educating people about plant life through the Network website
- Connecting people through our website, 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 team of botanists that between them have an extensive knowledge of the native plants of New Zealand.

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. 2018](#)). The main threat categories used are: Extinct, Nationally Critical, Nationally Endangered and Nationally 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 ['Conservation status of New Zealand indigenous vascular plants, 2017'](#) by [de Lange et al. \(2018\)](#).

Recently other committees have been established to review the status of non-vascular plants and have produced assessments for New Zealand mosses ([Rolfe et al., 2016](#)) as well as horworts and liverworts ([de Lange et al., 2015](#)).

Leycesteria formosa

COMMON NAME

Himalayan honeysuckle

FAMILY

Caprifoliaceae

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

LEYFOR

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. A plant of coastal and lowland habitats (Timmins & MacKenzie 1995). The plant occurs in streams and favours damper habitats (Veitch 1995; Department of Conservation 1996). A plant of streams, shrublands, light gaps in forests (such as windfall gaps), roadsides, exotic plantations, farm hedges and wasteland habitats (Veitch 1995; Department of Conservation 1996). A plant of scrub and forest margin, shrubland and riverbed communities (Timmins & MacKenzie 1995).

FEATURES

Shrub to 2m high; stems hollow, glabrous, green, glaucous at first. Petiole .5~2cm long, purplish, with hairy groove on upper side. Lamina 4~14 x 1.5~8cm, ovate or broad-ovate, mostly entire, sometimes 5~9-lobed with rounded sinuses, becoming glabrous except for midrib and bases of main veins; base rounded to cordate; apex long-acuminate. Infl. 3~8cm long at flowering. Bracts mostly 1~3cm long, sessile, broad-ovate, aristate-acuminate, generally glandular-hairy, usu. deep reddish-purple. Calyx small, hidden by bracts; lobes very unequal. Corolla approx. 1.5cm long, funnellform, white; lobes rounded at apex, much < tube, with glandular-hairy margins. Stamens shortly exerted. Style > stamens. Berry 7~10mm diam., subglobose, dark brownish-purple, glandular-hairy. Seed 1.1~1.5mm long, obovoid-ellipsoid, shining brown, minutely white-dotted. (- Webb et. al., 1988)

SIMILAR TAXA

An evergreen shrub 2 - 3 metres tall (Hilgendorf 1926; Department of Conservation 1996). The plant has green hollow stems (Hilgendorf 1926; Department of Conservation 1996). The leaves occur opposite each other on the branches (Hilgendorf 1926). The leaves are 8 cm long (up to 24cm long (Department of Conservation 1996)), broad at the base and pointed at the tip (Hilgendorf 1926). The flowers are white and pink in drooping spikes (Hilgendorf 1926). The flowers are enclosed within pairs of purplish leaves (Hilgendorf 1926). The red-purple bracts which surround the small flowers are a conspicuous distinguishing feature of this plant (Veitch 1995; Department of Conservation 1996). The fruit is black brownish purple and is 7 - 10 mm in diameter (Veitch 1995; Department of Conservation 1996).

FLOWERING

December, January, February, March, April, May.

FLOWER COLOURS

White

LIFE CYCLE

Perennial. Abundant seed produced (Timmins & MacKenzie 1995; Veitch 1995, Department of Conservation 1996). Water and birds disperse seed (Veitch 1995; Department of Conservation 1996).



Stokes Valley. Dec 2001. Photographer: Jeremy Rolfe



Himalayan honeysuckle. Photographer: John Barkla

YEAR NATURALISED

1878

ORIGIN

temp Himalayan

REASON FOR INTRODUCTION

Ornamental

TOLERANCES

The plant is shade intolerant.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/leycesteria-formosa/>

Lonicera japonica

COMMON NAME

Japanese honeysuckle

FAMILY

Caprifoliaceae

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Lianes & Related Trailing Plants - Dicotyledons

NVS CODE

LONJAP

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. A plant of coastal and lowland communities which grows in moderately fertile sites. The plant grows more vigorously in deeper valley soils (Department of Conservation 1996). Grows best on calcereous soils and moist forest soils; it rarely establishes on excessively drained and drought-prone sandy or stony soils (Williams and Timmins, 1997). Occurs in scrub, forest margins, shrublands, disturbed or secondary forest, coastal areas, modified lowland forest, wetland margins, inshore islands, roadsides, farm hedges, wasteland, rough pasture, open forest, forest, wetlands, streambanks and around margins and in clearings (Webb et. al. 1988).

FEATURES

Vigorous climber, evergreen or semi-evergreen in cold districts. Stems mostly purplish and hirsute when young. Leaves dimorphic - those produced in colder weather in early spring sinuate to deeply lobed; summer leaves and those on reproductive shoots entire. Petiole to 1.3cm long, densely hirsute. Lamina of entire leaves 2.5~12 x 1.5 ~ 6cm, ovate-oblong, ovate or ovate-elliptic, usu. deep shining green or sometimes yellowish-green above, lighter green below, sometimes mottled yellow, densely hairy to glabrous on veins beneath; midrib above glabrous or hairy; base rounded, truncate or subcordate; apex obtuse to acute; leaves subtending; flowers similar but smaller, all free. Flowers in axillary pairs, fragrant; peduncles 5~25mm long, densely hirsute. Bracteoles generally oblong-obovate, much < ovaries. Calyx lobes very small, roughly narrow-triangular, fringed with long hairs. Corolla 2~4.5cm long, usu. white, becoming yellow after anthesis, often flushed pink on reverse, glandular-hairy outside; tube 1~3cm long, cylindric; limb 2-lipped; single linear lobe of lower lip recurving; upper lip 4-toothed. Stamens and style < to = corolla limb. Ovaries separate. Berry 5~7mm diam., broad-ovate to suborbicular, glossy black. Seed around 2mm diam. (- Webb et. al., 1988)

SIMILAR TAXA

The plant is a vigorous perennial climber with aromatic flowers (Webb et. al. 1988). The plant has hairy purplish young stems. The flowers are paired and tubular and are white to yellow in colour. The berries are black. The leaves are entire, roughly oval in outline to deeply lobed, lighter green below. Leaves are 2.5-12 x 1.5-6cm.

FLOWERING

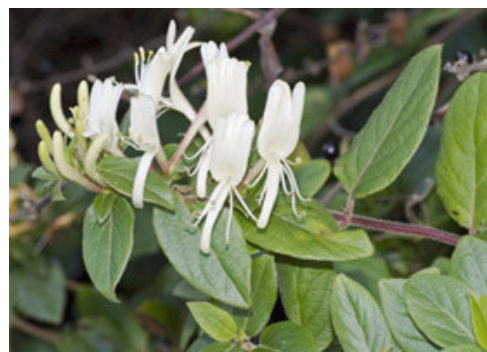
September, October, November, December, January, February, March, April, May

FLOWER COLOURS

Red/Pink, White



Lonicera japonica. Photographer: John Smith-Dodsworth



Haywards Hill, Upper Hutt. Apr 2006. Photographer: Jeremy Rolfe

LIFE CYCLE

Perennial. Leaves are retained over winter and are capable of growing in equable conditions. Seeds require a period of cold temperatures to break dormancy - temperatures of 5-8 degrees Celsius for 60 days. Germination occurs in spring as soon as air temperatures reach above 10 degrees Celsius. Plant populations seem to grow entirely vegetatively as no seedlings have been seen around established plants (Silbery pers. comm.).

YEAR NATURALISED

1926

ORIGIN

E Asia

REASON FOR INTRODUCTION

Ornamental

TOLERANCES

The plant is intolerant to shade and resprouts from broken stems or roots due to physical damage or grazing. Seedlings require high light. Frost, wind and drought tolerant and well adapted to low light. Very tolerant to moisture; moderate tolerance to shade e.g. under Kanuka forest. Growth is limited by the death of shoots by frost; many inland areas of the SI are probably too dry; grows on a range of substrates from pH 4.0-7.9; high degree of shade tolerance, at least for vegetative growth. Requires medium soil fertility (Atkinson 1997).

ETYMOLOGY

japonica: Of Japan

Reason For Introduction

Life Cycle Comments

Perennial. Leaves are retained over winter and are capable of growing in equable conditions. Seeds require a period of cold temperatures to break dormancy - temperatures of 5-8 degrees Celsius for 60 days. Germination occurs in spring as soon as air temperatures reach above 10 degrees Celsius.

Reproduction

Plant populations seem to grow entirely vegetatively as no seedlings have been seen around established plants (Silbery pers. comm.). The plants are dispersed through the transportation of stems. Shoots reach up to 10m away.

Seed

Seed viability is unknown (Wotherspoon 1996).

Dispersal

Birds disperse seed and road machinery.

Tolerances

The plant is intolerant to shade and resprouts from broken stems or roots due to physical damage or grazing. Seedlings require high light. Frost, wind and drought tolerant and well adapted to low light. Very tolerant to moisture; moderate tolerance to shade e.g. under Kanuka forest. Growth is limited by the death of shoots by frost; many inland areas of the SI are probably too dry; grows on a range of substrates from pH 4.0-7.9; high degree of shade tolerance, at least for vegetative growth. Requires medium soil fertility (Atkinson 1997).

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/lonicera-japonica/>

Jasminum polyanthum

COMMON NAME

Jasmine

FAMILY

Oleaceae

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Lianes & Related Trailing Plants - Dicotyledons

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial.

FEATURES

Perennial, evergreen, climbing, almost hairless, non-woody vine. Stems round, tough, very long, rooting at nodes. Leaves opposite, pinnate with usually 7 leaflets, terminal leaflet up to 7 x 2.5 cm, others smaller, all entire. Flowers clustered in panicles, tube-like, up to 25 mm diameter, very fragrant, white, pink in bud, Jan-Dec. Berries glossy black, 5-8 mm diameter, rarely formed.

SIMILAR TAXA

Easily identified climber with opposite palmately compound leaves and fragrant pink and white flowers.

FLOWERING

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

FLOWER COLOURS

Red/Pink, White

LIFE CYCLE

Evergreen perennial. Can spread from cuttings and grows from any small section of stem material. The viability of the seed in the seed bank is unknown (Wotherspoon 1996). In NZ, seeds were rare, but are now found on plants in some areas; produces few seeds. Sets viable seed (Fromont and King, 1992). The seed is dispersed by birds.

YEAR NATURALISED

1980

ORIGIN

W China

REASON FOR INTRODUCTION

Ornamental

TOLERANCES

The plant is intolerant of more than a few degrees of frost and only grows vigorously in warmer areas (Webb et. al. 1988). Tolerant of frost, shade and moisture. Can flower under a full canopy (Fromont and King, 1992).

ETYMOLOGY

jasminum: Believed to be derived from 'ysmyn', the Arabic name for Jasmine.



Stokes Valley. Aug 2005. Photographer: Jeremy Rolfe



Stokes Valley. Aug 2005. Photographer: Jeremy Rolfe

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.

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. (1988). *Flora of New Zealand, volume IV. Naturalise Pteridophytes, Gymnosperms, Dicotyledons*. DSIR Botany Division. 1365pp.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/jasminum-polyanthum/>

Solanum mauritianum

COMMON NAME

Woolly nightshade

FAMILY

Solanaceae

AUTHORITY

Solanum mauritianum Scop.

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

SOLMAU

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. A lowland plant. The plant occurs in scrub and forest margin and shrubland communities. Invades pastoral land, native forest margins and urban areas.

FEATURES

Spreading unarmed shrub or small tree to 10m tall and with trunk to 15cm diam., with all parts stellate-tomentose, the hairs generally sessile to long-stalked. Leaves on vegetative and most flowering shoots with prominent stipule-like auricles 5~25mm long at base; petioles to 6mm long on flowering shoots, longer on strong vegetative shoots. Lamina 10~25 x 3.5~10cm, ovate to elliptic, entire, light to dark green on upper surface, white to yellowish-green on lower surface; base cuneate; apex usu. acuminate but blunt at tip. Panicles dense, many-flowered, corymbose, terminal at first; rachis to 18cm long, stout; pedicels generally erect at fruiting. Calyx approx. 5mm long, not accrescent; lobes mainly elliptic. Corolla 1.5~2cm diam., usu. mauve to purple, occasionally white; lobes ovate or triangular-ovate, stellate-tomentose outside. Anthers 2~3mm long. Berry approx. 1cm diam., globose, dull yellow; stone cells 0. Seeds 1~2mm long, oblong-obovoid to suborbicular. (-Webb et. al., 1988)

SIMILAR TAXA

Shrub or small tree up to 10m; trunk up to 20cm in diameter; leaves are ovate and grey-green on the upper surface, densely covered in felt-like hairs; leaves (commonly 10-25cm long and 3.5-10cm wide) have a very pungent smell; flowers (1.5-2cm diameter) have 5 purple lobes with a yellow centre; berries (1cm diameter) are green ripening to yellow; each berry contains many seeds (1-2mm long). Soft wooded tree.

FLOWERING

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

FLOWER COLOURS

Violet/Purple, White

YEAR NATURALISED

1883



Solanum mauritianum. Photographer: Richard Hursthouse



a picture of *Solanum mauritianum*.
Photographer: John Smith-Dodsworth

ORIGIN

S Brazil, Uruguay

ETYMOLOGY

solanum: Derivation uncertain - possibly from the Latin word sol, meaning "sun," referring to its status as a plant of the sun. Another possibility is that the root was solare, meaning "to soothe," or solamen, meaning "a comfort," which would refer to the soothing effects of the plant upon ingestion.

Reason For Introduction

Ornamental

Life Cycle Comments

Perennial. Trees lose vigour after 15 years and die branch by branch. Seedlings established in summer can bear flowers by the autumn. Persistent seed bank (Fromont and King, 1992).

Dispersal

Seed is bird dispersed. Although the majority of the fruit fall to the ground beneath the parent plant, many berries are eaten by birds and seed dispersed this way.

Tolerances

The plant has the ability to resprout after physical damage. Moderate tolerance to shade; tolerant to frost; moderate moisture tolerance (Fromont and King, 1992). Requires medium to high soil fertility (Atkinson 1997).

Poisonous plant:

The globular yellow berries are poisonous if eaten.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/solanum-mauritianum/>

Ligustrum sinense

COMMON NAME

Chinese privet

FAMILY

Oleaceae

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

LIGSIN

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. A plant of coastal and lowland habitats (Timmins & MacKenzie 1995). The plant occurs in sites of low-high fertility (Timmins & MacKenzie 1995). A plant of scrub and forest margin, roadsides, fencelines, open forest communities (Timmins & MacKenzie 1995). Communities in which the plant occurs are alluvial forest remnants, wastelands, shrublands, open stream systems and coastal areas (Department of Conservation 1996).

FEATURES

Shrub or small tree to approx. 5m high, evergreen, or semi-deciduous in cold districts. Shoots densely hairy. Petioles to 5mm long, hairy. Lamina 2.5~6 x 1.25~2.5cm, elliptic or elliptic-oblong, dull green above, hairy on midrib beneath and usu. above in lower part, ciliolate when young; base broad-cuneate; apex usu. obtuse. Panicles to around 10cm long, rather loose; branches densely hairy, somewhat flattened, generally angular; pedicels short. Bracts and bracteoles linear to oblong, caducous. Flowers very fragrant. Calyx 1~2mm long, glabrous or nearly so; lobes very shallow. Corolla white; tube 1.5~2mm long, slightly > calyx; lobes about 3mm long, elliptic-ovate, spreading, subacute. Stamens = or slightly < corolla lobes; anthers pinkish-mauve or purple. Style exserted. Fruit 4~6mm diam., globose or subglobose, dull- or purplish-black. Seed 3~4mm long, oblong, shallowly grooved. (- Webb et. al., 1988)

SIMILAR TAXA

A shrub or small tree to 5 m high, evergreen or semi-deciduous with densely hairy shoots (Department of Conservation 1996). Leaf stalks are hairy, leaves are dull green above, hairy on the midrib below and oval (up to 6 cm) (Department of Conservation 1996). The plant has panicles of small white flowers (Department of Conservation 1996), fragrant (Anon., 1997: Pestfacts 49, ARC). The fruit is 6 mm in diameter and dull black (Department of Conservation 1996). It looks a bit like putaputaweta (Department of Conservation 1996).

FLOWERING

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

FLOWER COLOURS

Violet/Purple, White

YEAR NATURALISED

1950

ORIGIN

China



Ligustrum sinense. Photographer: John Smith-Dodsworth



Ligustrum sinense. Photographer: Richard Hursthouse

Reason For Introduction

Ornamental

Life Cycle Comments

Perennial. The flower is bisexual (Timmins & MacKenzie 1995).

Reproduction

reproduces by seed.

Seed

Seed is produced (Timmins & MacKenzie 1995). Seeds may remain viable up to 6 months under 4dC refrigeration (Timmins & MacKenzie 1995).

Dispersal

Gravity and vertebrates disperse seed (Timmins & MacKenzie 1995). The seed is dispersed by birds (Department of Conservation 1996).

Tolerances

The plant is highly tolerant to shade; tolerant to drought; slightly tolerant to poor drainage (Timmins & MacKenzie 1995). The plant tolerates clay soil (Timmins & MacKenzie 1995). Requires low to high soil fertility (Atkinson 1997).

Poisonous plant:

Poisonous purplish-black berries.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/ligustrum-sinense/>

Ligustrum lucidum

COMMON NAME

Tree privet

FAMILY

Oleaceae

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

LIGLUC

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. A plant of coastal and lowland habitats. The plant occurs in sites of low-high fertility. A plant of scrub and forest margins, roadsides, fencelines and open forest communities. A plant of forest, lowland and coastal, forest fragments, shrublands, roadsides, farm hedges, wastelands, domestic garden sites. The plant has naturalised in waste places, margins of remnant forest stands, coastal cliffs and gardens. Areas at risk of invasion by the plant are forests and margins and shrublands.

FEATURES

Glabrous, small or medium-sized evergreen tree to approx. 10m high, sometimes a dense shrub. Shoots glabrous. Petioles mostly 1~2cm long. Lamina 5~13 x 3~6cm, ovate to elliptic-ovate, glossy above; base broad-cuneate to rounded; apex usu. abruptly short-acuminate, sometimes acute. Panicles up to 25 x 20cm, dense, broadly pyramidal; branches angular; pedicels very short. Bracts oblong or oblong-lanceolate; bracteoles much smaller, caducous. Flowers fragrant. Calyx 1~2mm long; lobes indistinct. Corolla white; tube about 1.5mm long; lobes 2~2.5mm long, oblong-elliptic, reflexed, with generally involute margins, acute. Stamens around 4mm long, exserted; anthers yellow. Style included. Fruit to 6 x 5mm, ellipsoid-oblong, bluish- or purplish-black, usu. pruinose. Seed approx. 5mm long, broadly ellipsoid, ribbed on back. (- Webb et. al., 1988)

SIMILAR TAXA

A small to medium sized glabrous, evergreen tree. The plant grows up to 10 metres tall. The leaves are oval, glossy and 5-13 cm x 3-6cm. The flowers are white and fragrant and occur in long panicles. The fruit are bluish or purple-black and are 6 x 5 mm in size.

FLOWERING

November, December, January, February, March

FLOWER COLOURS

White, Yellow

YEAR NATURALISED

1958

ORIGIN

China, Korea

Poisonous plant:

Poisonous purplish-black berries.



Ligustrum lucidum. Photographer: Richard Hursthouse



Ligustrum lucidum. Photographer: Richard Hursthouse

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/ligustrum-lucidum/>

Actinidia deliciosa

COMMON NAME

Kiwifruit

FAMILY

Actinidiaceae

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Lianes & Related Trailing Plants - Dicotyledons

NVS CODE

ACTCHI

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial.

FEATURES

Vigorous, dioecious, densely hairy vine. Shoots have shaggy, reddish, simple hairs when young. Petioles reddish tomentous, very variable in length but usually less than lamina. Lamina to about 14 X 14 cm, broadly ovate, with tomentum of whitish hairs beneath, also with simple scattered reddish hairs but becoming almost hairless above, margins denticulate or ciliate. White flowers to about 6 cm across (larger on female than male plants). Fruit 4-8 x 3-4 cm, brown and hairy with green flesh and numerous small black seeds.

SIMILAR TAXA

Quite similar to *A. chinensis*, is easily identified by the distinctive coat of red hairs on young shoots.

FLOWERING

October, November, December

FLOWER COLOURS

White

YEAR NATURALISED

1982

ORIGIN

S. China

ETYMOLOGY

actinidia: From the Greek aktis 'ray' or 'star', referring to the star-like flowers or rayed stigmas of the female blooms

Reason For Introduction

Agricultural

Life Cycle Comments

Perennial.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/actinidia-deliciosa/>



Alongside railway track, Auckland. Dec 2006.
Photographer: Peter de Lange



Alongside railway track, Auckland. Dec 2006.
Photographer: Peter de Lange

Passiflora tripartita var. mollissima

COMMON NAME

Banana passionfruit

FAMILY

Passifloraceae

AUTHORITY

Passiflora tripartita var. *mollissima* (Kunth) Holm-Niels. & P.Jørg.

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Lianes & Related Trailing Plants - Dicotyledons

NVS CODE

PASTVM

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. Typically found in shrublands, forest margins, roadsides, wastelands, farm and orchard hedges and domestic gardens. Prefers light gaps on fertile soil, In cooler areas regular frosts and occasional snowfalls appear to limit the plants growth

FEATURES

Vigorous vine, shoots densely hairy with large persistent stipules. Leaves 3-lobed up to 14 cm long, densely tomentose beneath, at least some hairs above. Flowers are pink with long hypanthium (up to 9 cm) and short petals. Fruit up to about 10 cm long, obovoid, green ripening to orange-yellow and containing edible orange pulp with small black seed.

SIMILAR TAXA

Can be distinguished from *P. tarminiana* by the large persistent stipules, and the long hypanthium on the flower. *P. mixta* is also similar, but has salmon-pink flowers and a pubescent hypanthium. From var. *azuayensis* (q.v.) it is distinguished by having 'leaves moderately to densely pubescent on upper surface' (Heenan & Sykes 2003); var. *azuayensis* has 'leaves glabrous to glabrate on upper surface' (ibid.)

FLOWERING

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

FLOWER COLOURS

Red/Pink

YEAR NATURALISED

1958

ORIGIN

Tropical N. South America

ETYMOLOGY

passiflora: Passionflower



Passiflora tripartita. Photographer: ARC



Seedling, Lower Hutt. Dec 2006. Photographer: Jeremy Rolfe

Reason For Introduction

Agricultural

Life Cycle Comments

Perennial. Few seedlings are present owing to the parent plants combinations of low germination levels (around 25%), high seedling mortality and shading (Buxton 1994).

Reproduction

Reproduces from seed and can grow from stem fragments.

Seed

Moderate seed numbers are produced by the plant. Seed accumulates in the soil seed bank over time, ensuring continuous germination (Williams & Buxton 1995).

Dispersal

The fruit is eaten by pigs, possums, kiore, ship rats, Norway rats, and many birds, however it is not known whether the seed remains viable after consumption.

Tolerances

The plant is intolerant to deep shade and reprints after grazing and physical damage. Requires medium soil fertility.

REFERENCES AND FURTHER READING

Heenan, PB; Sykes, WR 2003. *Passiflora* (Passifloraceae) in New Zealand: a revised key with notes on distribution. *NZ J Botany* 41: 217-221. DOI: [10.1080/0028825X.2003.9512842](https://doi.org/10.1080/0028825X.2003.9512842)

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/passiflora-tripartita-var-mollissima/>

Glyceria maxima

COMMON NAME

Floating sweetgrass, reed sweetgrass

FAMILY

Poaceae

AUTHORITY

Glyceria maxima (Hartm.) Holumb.

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Grasses

NVS CODE

GLYMAX

CONSERVATION STATUS

Not assessed

BRIEF DESCRIPTION

Robust bright green grass, up to nearly 2 m tall, with creeping rhizomes that form large patches excluding all other plants. The tip of the leaf is boat-shaped. The seedheads are open and branched with many spikelets. The sheath has obviously cross veins.

DISTRIBUTION

Widely naturalised, abundant in most lowland parts of North Island, more scattered and absent from much of South Island.

HABITAT

Aquatic in drains and other slow flowing waterbodies, often forming dense floating mats in open frost-free areas. Also in swamps.

FEATURES

A perennial aquatic grass, to 1.8 m tall. It has an extensive root system up to c. 1 m deep, as well as sprawling underground stems. The leaves are shiny, hairless and mid-green in colour. They grow 30-60 cm above the water surface and are 0.7-2 cm wide. Leaves end in an abrupt point and their edges are rough to touch. The flower head is open, branched, and 15-45 cm long comprising a large number of spikelets that range from yellow to green in colour, with a purplish tinge. Flowering occurs in spring and summer. Small dark brown seeds are produced prolifically throughout summer and autumn.

SIMILAR TAXA

Glyceria declinata and *G. fluitans*. Both of the other *Glyceria* species present in New Zealand are much smaller (up to 50 cm tall) with narrow sparingly branched, distinctively brown seedheads and form low clumps as opposed to the tall erect clumps formed by reed sweetgrass.

FLOWERING

Spring/summer.

FLOWER COLOURS

Green

FRUITING

late spring-autumn



Glyceria maxima. Photographer: John Smith-Dodsworth



Glyceria maxima. Photographer: John Smith-Dodsworth

LIFE CYCLE

Perennial. Spread by seed and rhizomes. Prolific seed production. Seeds and rhizome via water flow. Contaminated diggers, livestock, soil movement, dumped vegetation, eel nets, boats and trailers all spread seed and fragments into new catchments.

YEAR NATURALISED

1906

ORIGIN

Europe

REASON FOR INTRODUCTION

Pasture species

CONTROL TECHNIQUES

Can be controlled manually, mechanically or herbicidally depending on situation.

TOLERANCES

Tolerant to physical damage, grazing and pollutants. Intolerant of heavy frost and shade.

ETYMOLOGY

glyceria: From the Greek glykos 'sweet'.

ATTRIBUTION

Prepared by Paul Champion and Deborah Hofstra (NIWA)

REFERENCES AND FURTHER READING

Champion et al (2012). Freshwater Pests of New Zealand. NIWA publication.

<http://www.niwa.co.nz/freshwater-and-estuaries/management-tools/identification-guides-and-fact-sheets/freshwater-pest-species>.

Coffey BT, Clayton JS (1988). New Zealand water plants: a guide to plants found in New Zealand freshwaters. Ruakura Agricultural Centre. 65pp.

Johnson PN, Brooke PA (1989). Wetland plants in New Zealand. DSIR Field Guide, DSIR Publishing, Wellington. 319pp.

Champion et al (2010). An illustrated guide to common grasses, sedges and rushes of New Zealand. NZ Plant Protection Society Inc, 182pp.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/glyceria-maxima/>

Cortaderia selloana

COMMON NAME

Pampas grass

FAMILY

Poaceae

AUTHORITY

Cortaderia selloana (Schult. et Schult.f.) Asch. et Graebn.

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Grasses

NVS CODE

CORSEL

CONSERVATION STATUS

Not assessed

BRIEF DESCRIPTION

Robust tussock with tall erect flowering stems bearing dense heads of white to pale pink flowers.

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 folded and 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.

SIMILAR TAXA

Can be separated from native *Austroderia* (toetoe) by the prominent single midrib on the leaves (*Austroderia* species have several prominent veins.). Can be separated from *C. jubata* by the glabrous leaf bases, and the fresh flowering spike is white to pink rather than violet of *C. jubata*, and is exerted further from the clump.

FLOWERING

March, April, May

FLOWER COLOURS

Red/Pink, White



Plimmerton. Jun 2006. Photographer: Jeremy Rolfe



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

FRUITING

April-May (Timmins & MacKenzie 1995).

YEAR NATURALISED

1925

ORIGIN

Central South America

REASON FOR INTRODUCTION

Agricultural.

LIFE CYCLE COMMENTS

Perennial. Seed germination occurs in autumn. The plant is dioecious with 50% female and 50% hermaphrodite plants. The plant is readily cultivated from divisions. Seed production is from 90 000 - 100 000 per seed head. It is unlikely that this plant forms a long term seed bank. Viability in the seed bank is unknown.

Seed is dispersed by gravity, man, vertebrates, machinery, in gravel (Timmins & MacKenzie 1995) and by wind. The seed is very light and is wind-dispersed up to 50km.

TOLERANCES

Seedlings are intolerant to drought and slightly tolerant of frost. Seedlings are slightly intolerant to intolerant of poor drainage. Adult plants are tolerant of drought and frost. Cutting results in regrowth. Grazing results in regrowth unless it is frequent, which results in death. Burning results in vegetative regrowth and provides a seedbed for invasion from surrounding areas.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/cortaderia-selloana/>

Salix xfragilis

COMMON NAME

Crack willow

SYNONYMS

Salix alba L. x *S. euxina* I.V. Belaeva; *S. fragilis* L.

FAMILY

Salicaceae

AUTHORITY

Salix fragilis L.

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

CONSERVATION STATUS

Not assessed

BRIEF DESCRIPTION

Deciduous tree up to 25 m tall, branches not drooping but breaking easily, often with an audible crack (hence the common name), leaves narrow and lance-shaped, often with bright red swellings on them, flowers produced in spring about the same time as emergence of leaves, with long and narrow (up to 7.5 cm long and 1 cm across) yellow green in colour.

DISTRIBUTION

Widespread and often abundant throughout New Zealand.

HABITAT

Riparian margins of water bodies.

FEATURES

Tree to 25m high, sometimes only a shrub; bark rough and fissured. Branches spreading but not pendulous. Shoots dark or brownish green, readily and audibly snapping when bent, not slender. Bud scales dark shining brown, becoming glabrous. Shoots and leaves somewhat silky when very young, but quickly glabrous. Petiole of leaves on reproductive shoots < 1cm long. Lamina 5~15 x 1~2.5cm, sometimes larger on water shoots, lanceolate, glaucous beneath, mainly shining above, glandular-serrulate; apex acuminate. Stipules minute. Catkins usu. male, rarely female, appearing with or after leaves. Male catkins 4~7.5cm long, spreading or curving downwards, narrow-cylindric; rachis villous. Bracts 2~2.5mm long, oblong-elliptic, incurved and generally cucullate when fresh, pale green or yellowish, densely clothed in antrorse hairs; apex rounded. Glands 2, .4~.6mm long, elliptic-oblong, rectangular to square. Stamens 2; filaments hairy towards base. Female catkins similar to male. Ovary glabrous, sessile or shortly stalked.

SIMILAR TAXA

Similar to other lanceolate leaved willows, but can be distinguished by the brittle green to reddish brown (rather than yellow) shoots, spreading rather than drooping branches and red galls on leaves.

FLOWERING

September to October

FLOWER COLOURS

Green

FRUITING

Europe and West Asia



Salix fragilis. Photographer: John Smith-Dodsworth



Salix fragilis. Photographer: John Smith-Dodsworth

LIFE CYCLE

Stem fragments dispersed by water and contaminated machinery.

YEAR NATURALISED

1880

ORIGIN

Europe, Western Asia

REASON FOR INTRODUCTION

Erosion control for rivers and other waterways

CONTROL TECHNIQUES

Can be controlled manually, mechanically or herbicidally depending on situation.

TOLERANCES

The plant is intolerant of shade and highly tolerant of poor drainage. Physical damage and grazing result in resprouting.

NOTES ON TAXONOMY

Recently recognised as a hybrid in Belyaeva, I. (2009) Nomenclature of *Salix fragilis* L. and a new species, *S. euxina* (Salicaceae). Taxon 58(4): 1344-1348. The hybrid between this entity and *Salix alba* = *S. xrubens* is now included in the taxon *S. xfragilis* as a synonym.

ATTRIBUTION

Factsheet prepared by Paul Champion and Deborah Hofstra (NIWA). Features description from Webb et. al. (1988).

REFERENCES AND FURTHER READING

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. (1988). Flora of New Zealand Volume 4: Naturalised pteridophytes, gymnosperms, dicotyledons. Botany Division, DSIR, Christchurch.

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Belyaeva, I.V. (2009). Nomenclature of *Salix fragilis* L. and a new species *S. euxina* (Salicaceae). Taxon 58(4): 1344-1348.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/salix-xfragilis/>

Tradescantia fluminensis

COMMON NAME

Wandering Jew

FAMILY

Commelinaceae

AUTHORITY

Tradescantia fluminensis Velloso

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Herbs - Monocots

NVS CODE

TRAFU

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. A lowland plant of sites with moderate fertility. Can rapidly invade light gaps but prefers cool moist and shaded conditions. Thrives in forest, scrub and forest margins, cliffs, bluffs, and riverbed communities.

FEATURES

Trailing perennial with succulent stems, rooting readily at nodes. Forms a carpet up to 50cm thick. Alternate leaves 3-6 cm long, ovate-elliptic, shining and loosely clasping the stem. Leaves are typically dark green, but can have longitudinal stripes and/or purplish bases, these forms typically revert to green. The flowers are in clusters, are star-shaped and have 3 delicate white petals that are 10mm long. Seed not seen in NZ.

SIMILAR TAXA

There are other species of *Tradescantia* in cultivation but none as widespread as *T. fluminensis*. *T. zebrinus* Bosse is green and white striped with deep purple undersides. *T. cerinthoides* Kunth is shortly creeping, and rather succulent. The stems are usually semi-erect. The stems are dark purple, the leaves are dark green often striped purple or completely purple. The leaves are very hairy on the undersides

FLOWERING

December, January

FLOWER COLOURS

White

LIFE CYCLE

Perennial. No seed is produced in New Zealand. Fragments are dispersed by water, stock and humans (through dumping of garden rubbish, soil movement, pot plants and deliberate planting)

PROPAGATION TECHNIQUE

Vegetatively reproduces from adventitious roots on branching stems and fragmentation.

YEAR NATURALISED

1916

ORIGIN

Brazil

REASON FOR INTRODUCTION

Ornamental.



Upper Hutt. Dec 2001. Photographer: Jeremy Rolfe



Stokes Valley. Dec 2001. Photographer: Jeremy Rolfe

TOLERANCES

Very tolerant to shade. Experimentally shown to grow at irradiance levels 1-90% normal daylight over most of the year (Maule et al., 1995) and in poor drainage. Is intolerant to frost, but can quickly recover, or survive under trees etc where frosts are lighter. Resprouts from shoot fragments after physical damage and grazing (Timmins & MacKenzie 1995).

ETYMOLOGY

fluminensis: From the Latin flumen 'river and -ensis 'origin', meaning growing near rivers

CONTROL TECHNIQUES

See the Weedbusters [website](#) for detailed descriptions of various control techniques.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/tradescantia-fluminensis/>

Selaginella kraussiana

COMMON NAME

Selaginella, African clubmoss

FAMILY

Selaginellaceae

AUTHORITY

Selaginella kraussiana (Kunze) A. Braun

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Lycophytes (clubmosses, selaginella, quillworts)

NVS CODE

SELKRA

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. A lowland plant of sites with moderate fertility. Occurs mainly in damp, shaded sites eg tall forest, low forest, scrub, forest margins and streambanks.

FEATURES

Small, carpet-forming groundcover. Roots long, fine. Stems creeping, slender, irregularly branched, rooting at nodes, forming loose mat. Leaves in rows, 2-4 mm. Spore cones rounded, 10 mm long.

SIMILAR TAXA

Superficially similar to many native mosses and leafy liverworts. It is actually a fern-ally that bears small cones underneath the leaves.

FLOWERING

N/A

FLOWER COLOURS

No flowers

LIFE CYCLE

Perennial. The plant has an eternal life span as it just keeps growing. Spores are dispersed by wind, boots, feet, stock and machinery. Stem fragments can be dispersed by soil and water movement as well as human activities.

PROPAGATION TECHNIQUE

Spores are thought to be viable for more than a year (Carol West, pers. comm.). Reproduces sexually by releasing spores. Also reproduces vegetatively by creeping stems with adventitious roots. Spores are produced, in cones on the undersides of the leaves.

YEAR NATURALISED

1919

ORIGIN

C&S Africa

REASON FOR INTRODUCTION

Ornamental.



Strobili. Colonial Knob Scenic Reserve, Porirua. Photographer: Jeremy Rolfe



Taita, Lower Hutt. Aug 2001. Photographer: Jeremy Rolfe

TOLERANCES

The plant is intolerant to drought and tolerant to shade and poor drainage. Resprouts after physical damage.

CONTROL TECHNIQUES

To learn about the various control techniques for this species visit the Weedbusters [website](#).

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/selaginella-kraussiana/>

Lupinus arboreus

COMMON NAME

Tree lupin

FAMILY

Fabaceae

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

LUPARB

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. Short tussockland, bare land, riverbeds, coastal sandy and well drained areas.

FEATURES

Short-lived, perennial shrub to 2-3 m high. Deep taproot. Stems densely silky-hairy when young, tough, erect, branching, becoming soft-woody. Leaves grey-green, hairless above, silky below, divided into 5-11 leaflets spreading out from one point finger-like; leaflets 15-40 x 3-10 mm. Flowers pea-like, 15-18 mm long, usually pale yellow (rarely white or bluish), sweetly scented, Oct-May. Seed pod stout, softly hairy, 40-80 mm long, firmly attached; splits explosively to disperse dark brown, mottled seeds, 4-6 mm long.

SIMILAR TAXA

L. angustifolius blue lupin is a semi-woody annual with blue flowers Aug-Apr, occasionally weedy. *L. polyphyllus* herbaceous weedy species with blue flowers. Hybrid *L. arboreus* x *polyphyllus* has larger and more leaflets, flower yellow with blue or purple streaks; is rarely weedy.

FLOWERING

October, November, December, January, February, March, April, May

FLOWER COLOURS

Yellow

YEAR NATURALISED

1899

ORIGIN

California, N. America

ETYMOLOGY

arboreus: From the Latin arbor 'tree', meaning tree-like



Lupinus arboreus. Photographer: John Smith-Dodsworth



Lupinus arboreus flowers. Photographer: John Smith-Dodsworth

Reason For Introduction

Ornamental

Life Cycle Comments

Perennial.

Reproduction

Reproduces via seed.

Seed

Seed long-lasting in soil.

Dispersal

Water and soil movement. Explosive pods. Deliberately sown for sand consolidation, erosion control.

Tolerances

Tolerates wind, salt, hot to cold, physical damage and grazing (not readily eaten), drought, low fertility (fixes nitrogen), fire. Intolerant of moderate shade and waterlogged soils.

Poisonous plant:

The seed are poisonous if they are chewed or crushed before eating.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/lupinus-arboreus/>

Prunus campanulata

COMMON NAME

Bell-flowered cherry, Taiwan cherry

FAMILY

Rosaceae

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

PRUCAM

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial.

FEATURES

Deciduous small tree up to 8 m high. Leaves cherry-like, usually 60-130 by 20-60 mm, thin and on 12-20 mm petioles. Leaves rounded at base, broadly elliptic with sharp point at tip, small teeth along entire leaf margin. Deep red bell-shaped flowers in clusters of 2-3. Fruit up to 12 x 10 mm, glossy scarlet, glabrous.

SIMILAR TAXA

The bell shaped flowers distinguish this spp. from all other naturalised Prunus in NZ

FLOWERING

July, August, September

FLOWER COLOURS

Red/Pink

LIFE CYCLE

Perennial.

YEAR NATURALISED

1988

ORIGIN

East Asia

REASON FOR INTRODUCTION

Ornamental

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/prunus-campanulata/>



Prunus campanulata. Photographer: John Smith-Dodsworth



Prunus campanulata. Photographer: John Smith-Dodsworth

Hedychium gardnerianum

COMMON NAME

Wild Ginger, Kahili Ginger

FAMILY

Zingiberaceae

AUTHORITY

Hedychium gardnerianum Ker Gawl.

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Herbs - Monocots

NVS CODE

HEDGAR

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. Forests, regenerating forest, streamside and alluvial forest, forest light gaps and gullies. Prefers moderate to high fertility, not found in very dry or rocky areas.

FEATURES

Non-woody perennial to 2 m tall, ginger-scented. Rhizomes massive, taro-like, close to ground surface, long, shallow rooted, much-branched, growing over each other, forming deep beds. Rhizome segments 4 x 10 cm, each producing an aerial stem usually annually. Stems to 2 m, erect, soft, unbranched, thickening to short pinkish collar at base. Leaves alternate, 20-45 x 10-15 cm, shiny, slightly hanging. Flowerhead 25-45 cm tall with many flowers, Jan-Mar. Flowers lemon-yellow with conspicuous red stamens, fragrant. Fruiting spike with fleshy orange fruits, 15-20 mm long, containing many bright scarlet seeds.

SIMILAR TAXA

Similar to *H. flavescens* (yellow ginger), *Zingiber spectabile* (culinary ginger) and *Canna* spp. but the leaves of *H. gardnerianum* are much broader than other gingers, and the tall flower heads of *H. gardnerianum* make it distinctive from *Canna* spp.

FLOWERING

January, February, March

FLOWER COLOURS

Red/Pink, Yellow

YEAR NATURALISED

1940

ORIGIN

India Himalayan region



Hedychium gardnerianum. Photographer: John Smith-Dodsworth



Hedychium gardnerianum. Photographer: John Smith-Dodsworth

Reason For Introduction

Ornamental

Life Cycle Comments

Perennial. The flower is hermaphrodite (Timmins & MacKenzie 1995).

Reproduction

In addition to regenerating from seed, it reproduces vegetatively from short stout rhizomes.

Seed

Up to 100 seeds are produced per flowerhead.

Dispersal

Seed is dispersed by birds, in particular tuis and blackbirds (Landcare Research 4/93). Rhizome fragments and seed are also spread by humans and water and soil disturbance.

Tolerances

Tolerant of frost and moderate shade (Seedlings require semi-shade) and slightly tolerant of drought, requires medium to high soil fertility. Flourishes on damp silt. Physical damage results in multiplication of rhizome pieces.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/hedychium-gardnerianum/>

Lantana camara var. aculeata

COMMON NAME

Lantana

FAMILY

Verbenaceae

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

LANCAM

CONSERVATION STATUS

Not assessed

FEATURES

Aromatic shrub; stems upright to spreading, or almost scrambling to about 2m high, usu. with recurved prickles. Petioles to 2cm long. Lamina 3~13 x 1.5~7cm, ovate or oblong-ovate, crenate or crenate-serrate, densely hispidulous or scabrid above, the hairs usually dense but soft below; glandular scales minute; base cuneate to subcordate; apex acute to short-acuminate. Infl. corymbose; flowers fragrant. Peduncles 3~10cm long, moderately slender; bracts (1~3)/4 length of corolla tube, linear-lanceolate, densely hairy but eglandular. Calyx 1.5~2.5mm long, ciliate. Corolla densely puberulent outside; tube around 1cm long, narrow-cylindric; limb 6~10mm diam., when fresh, rather flat except for generally recurved lobes, usu. initially cream or pale yellow, changing to pink to rose, rarely deep yellow or orange. Drupe approx. 5mm diam., globular, black or blue-black. (- Webb et. al., 1988)

SIMILAR TAXA

The pink and yellow variety is the bad one (Ewen Cameron pers. comm.) IN NZ the dominant weedy variety seems to be the pink and yellow form. However in some areas the orange and yellow form is proving to be weedy as well. Especially on Great Barrier Island where there are several infestations of this form. (Mike Harre Auckland Regional Council). In Sydney, pink/yellow hugs the coastline. Yellow/orange/red hugs the western areas at the base of the Blue Mountains. I suspect this is related to climate (lower rainfall and higher evaporation) though not proven. (Michael Clarke, Sydney)

FLOWER COLOURS

Cream, Yellow

ETYMOLOGY

aculeata: Prickly

POISONOUS PLANT:

The blue black fruit have poisoned children and stock.

REFERENCES AND FURTHER READING

Gardner, R.O. 1995. *Lantana camara* warning for Northern New Zealand. *Auckland Botanical Society Journal*, 50: 27-28.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/lantana-camara-var-aculeata/>



Lantana camara. Photographer: John Smith-Dodsworth



Lantana camara. Photographer: John Smith-Dodsworth

Asparagus scandens

COMMON NAME

Climbing asparagus

FAMILY

Asparagaceae

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Lianes - Monocots

NVS CODE

ASPSCA

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. Found in lowland and coastal forest, shrublands, mature broadleaf/podocarp forests especially those of light to moderate shade, streams, coastal areas, shrublands, epiphytic niches, roadsides, gravel pits/quarries, farm hedges, house gardens and wasteland areas. Can infest unmodified and fully intact forest.

FEATURES

Slender scrambling or climbing perennial. Tuberous roots. Stems 2-4 m long, green and much branched at the top, thin and wiry. Leaves are flat cladodes (resembling miro), usually in threes at each node, 5-15 mm x 1-1.5 mm. Flowers tiny, whitish, Sep-Dec. Round berry, 8 mm diam, green turning orange-red, Oct-Feb, with 1-2 seeds.

SIMILAR TAXA

Leaf-like cladodes in flat planes separate *A. scandens* from other asparagus species in NZ.

FLOWERING

September, October, November, December

FLOWER COLOURS

White

FRUITING

January, May, August (Timmins & MacKenzie 1995).

YEAR NATURALISED

1970

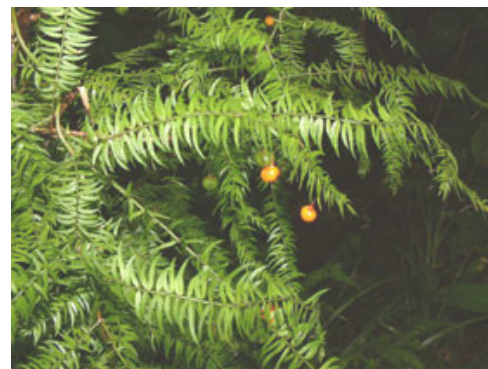
ORIGIN

trop & S Africa

ETYMOLOGY

asparagus: An old Greek name for this plant possibly derived from a- (an intensifier) and sparasso 'to tear', referring to the prickles of some species

scandens: Climbing; from the Latin scandere; groth habit



Coromandel, December. Photographer: John Smith-Dodsworth



Asparagus scandens. Photographer: Richard Hursthouse

Reason For Introduction

Ornamental

Life Cycle Comments

Perennial. The flower is hermaphrodite (Timmins & MacKenzie 1995).

Reproduction

Reproduces from seed and vegetatively by the transport of tuberous roots.

Seed

Seed is produced.

Dispersal

Seed is dispersed by birds. Tubers spread by soil movement, garden dumping and human activity.

Tolerances

Tolerant to heavy shade, but matures and fruits in moderate shade to full light. Wide range of moisture tolerance.

Tubers resprout in response to physical damage.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/asparagus-scandens/>

Zantedeschia aethiopica

COMMON NAME

Arum lily

FAMILY

Araceae

AUTHORITY

Zantedeschia aethiopica (L.) Spreng.

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Herbs - Monocots

NVS CODE

ZANAET

CONSERVATION STATUS

Not assessed

BRIEF DESCRIPTION

Evergreen clump forming plant with large arrowhead shaped leaves (up to 45 cm long and 25 cm wide) and pure white funnel shaped flowers (up to 25 cm long) with a bright yellow narrow sausage shaped centre (actually the flowers, the white part is a modified leaf).

DISTRIBUTION

Scattered throughout northern North Island, less common in southern North Island and northern South Island.

HABITAT

Swampy areas, often under willows and damp pasture and waste land.

FEATURES

Robust, evergreen, erect, clump-forming, to 1.5 m high, in close-set tufts from a tuberous rootstock with white fleshy roots; new tubers arising from shoots on the rootstock. Leaves large, leathery; laminae sagittate or ovate-cordate, 15-45 × 10-25 cm, dark green, the very fine veins somewhat lighter green, shining, entire, tip apiculate, margins undulate; petiole 40-100 cm long, lighter green, spongy, white on inside, purplish on outside. Scape ± = leaves, green, stout. Spathe ivory-white, bright green at base on outside, to 25 cm long, funnel-shaped, narrowed towards tip with a recurved apiculus to 2 cm long. Spadix ± ½ spathe, bright yellow; basal female zone, with staminodia interspersed, c. ¼-½ length of spadix, contiguous with upper male zone; sterile terminal appendage 0. Berries green or yellow, to ± 1 cm diam.

SIMILAR TAXA

Unlike most other wetland plants, but two other large plants in the arum family are superficially similar. Taro (*Colocasia esculenta*) and elephant ear (*Alocasia brisbanensis*) also have large leaves but arum can be distinguished by the veins of the leaf being the same colour as the rest of the leaf and the spathe being white

FLOWERING

October to December

FLOWER COLOURS

White, Yellow

FRUITING

Summer to autumn



Zantedeschia aethiopica. Photographer: John Smith-Dodsworth



Zantedeschia aethiopica. Photographer: John Smith-Dodsworth

LIFE CYCLE

Perennial. Seeds dispersed by water movement, birds and other animals. Local clonal spread by rhizomes, with longer distance spread by water movement, deliberate planting and garden discards.

YEAR NATURALISED

1870

ORIGIN

South Africa

REASON FOR INTRODUCTION

Ornamental plant

CONTROL TECHNIQUES

Can be controlled manually, mechanically or herbicidally depending on situation.

TOLERANCES

Tolerates wet (drought-resistant once established), wind, salt, hot to cold, most soil types, mod shade.

POISONOUS PLANT

When ingested this species causes burning of the mouth and alimentary canal. It also causes stomach pains and vomiting.

ATTRIBUTION

Prepared by Paul Champion and Deborah Hofstra (NIWA). Features description taken from Croasdale et al. (1994).

REFERENCES AND FURTHER READING

Croasdale, H., Flint E. A. and Racine, M. M. (1994). Flora of New Zealand Volume 3: Freshwater algae, chlorophyta, desmids with ecological comments on their habitats, *Staurodesmus Staurastrum* and the Filamentous desmids. Manaaki Whenua Press: Lincoln, New Zealand.

Weeds of Australia

(http://keyserver.lucidcentral.org/weeds/data/03030800-0b07-490a-8d04-0605030c0f01/media/Html/Zantedeschia_aethiopica.htm)

Johnson PN, Brooke PA (1989). Wetland plants in New Zealand. DSIR Field Guide, DSIR Publishing, Wellington. 319pp.

Popay et al (2010). An illustrated guide to common weeds of New Zealand, third edition. NZ Plant Protection Society Inc, 416pp.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/zantedeschia-aethiopica/>

Lycium ferocissimum

COMMON NAME

Boxthorn

FAMILY

Solanaceae

AUTHORITY

Lycium ferocissimum Miers

FLORA CATEGORY

Vascular – Exotic

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

LYCFER

CONSERVATION STATUS

Not assessed

HABITAT

Terrestrial. A plant of lowland and coastal habitats. A plant of low fertility sites. The plant occurs in sites with stony ground and gravel, as well as ungrazed areas. A plant that occurs in sand dunes. Other sites that the plant occurs are shrublands, coastal scrub (Porteus 1993) and other coastal area as well as scrub on cliffs, banks and roadsides. A plant of coastal shrublands and disturbed waste places.

FEATURES

Densely branched evergreen shrub, 1~6m high. Shoots and young leaves with minute glandular scales. Leaves subsessile or shortly petiolate, alternate on young shoots but on mature stems mostly in fascicles on short spurs along the rigid branch spines. Lamina 5~43 x 3~12mm, oblong, linear-oblong or spatulate; base attenuate; apex rounded-truncate. Flowers 1~2 together, on short spurs. Pedicels slender, around 5mm long at flowering, to 2cm long at fruiting. Calyx 4~8mm long, tubular-campanulate; teeth triangular, obtuse to acute. Corolla 10~13mm long; tube broad-cylindric; lobes 4~5mm long, obovate, pale mauve or cream; apex rounded. Filaments hairy at base. Fruit 5~12mm diam., globular or obovoid, scarlet.

SIMILAR TAXA

Boxthorn is an evergreen erect densely branched shrub with sharp thorns. The plant is from 1-6 m in height. The shoots and young leaves have minute glandular scales (Webb et. al. 1988). Leaves on young shoots are alternate, on mature stems the leaves are mostly clustered on short spurs along rigid spine like branches. The leaves are pale grey-green to yellowish green and up to 4cm X 1cm in area. Flowers occur, 1-2 (3) together, on slender stalks (5mm) that elongate to 2 cm when fruiting. The plant has a bright red, globular berry that is up to 1cm in diameter and is possibly poisonous.

FLOWERING

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

FLOWER COLOURS

Cream, Violet/Purple

LIFE CYCLE

Perennial. Any cut branches regrow if left touching the surface. Birds disperse seed.



Lycium ferocissimum. Photographer: John Smith-Dodsworth



Lycium ferocissimum. Photographer: ARC

YEAR NATURALISED

1897

ORIGIN

S Africa

REASON FOR INTRODUCTION

Agricultural

TOLERANCES

The plant is tolerant to drought and intolerant to shade. A plant that is tolerant of salt spray. Requires low to medium soil fertility (Atkinson 1997).

POISONOUS PLANT:

In the Poisonous plants of California by Thomas Fuller et al. they note that although the fruit is edible it has been suspected of poisoning humans and pigs and in humans has produced a narcotic effect. They also note the spines are mildly poisonous.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/lycium-ferocissimum/>

Glossary

abaxial	Facing away from the stem of a plant (especially denoting the lower surface of a leaf).
acerose	Narrow with a sharp stiff point.
achene	A simple, dry, one-seeded (one-celled) fruit.
acicular	Needle-shaped.
acidic	Having a low pH, opposite of basic or alkaline.
acrosopic	Pointing towards, or on the side of, the apex.
acuminate	Gradually tapered to a point. Sharply pointed.
acute	Pointed or sharp, tapering to a point with straight sides.
adnate	Fusion of unlike parts, e.g. stamens fused to petals.
adventive	A plant that grows in the wild in New Zealand but which was introduced to the country by humans.
agglutinated	Stuck together.
allelopath	An organism that releases compounds that are toxic to other species.
allelopathy	The release by an organism of compounds that are toxic to other species.
alternate	Attached singly at each node but changing from one side of a stem to the other.
alveolate	Honeycombed with ridged partitions.
amplexicaul	Clasping or surrounding the stem.
anamorph	Asexual fruiting stage, usually of an ascomycete fungus.
anastomosing	Rejoining after branching, as in some leaf veins.
annual	A plant that completes its complete life cycle within the space of a year.
annual evergreen	Plants that lose their over-wintering leaves rapidly in the first half of the growing season. Annual evergreens never present a leafless appearance, but are closer in a functional sense to a deciduous plant than they are to multi-annual evergreens.
annulus	Line of thickened cells that governs the release of spores from a sporangium.
anterior	Towards the front.
anther	The pollen-bearing portion of the stamen.
antheridium	Male reproductive organ formed on the prothallus of a fern.
anthesis	Flowering period from when the bud opens
apex	Tip; the point furthest from the point of attachment.
apices	Plural of apex. Tip, the point furthest from the point of attachment.
apiculate	Bearing a short slender and flexible point.
apiculus	A small, slender point.
apomixis	A form of reproduction whereby seed is formed without the usual mode of sexual fusion.
appressed	Pressed against another organ or surface.
aquatic	Growing, or living in, or frequenting water. Applied to plants and animals and their habitats. Opposite of terrestrial (land living).
archegonium	Female reproductive organ of a fern formed on the prothallus.
arcuate	Curved into an arch.
aril	An often fleshy appendage on the outside of a seed.
artificial thinning	Selectively removing vegetation to create gaps to facilitate natural invasion of native plants, or to plant later successional plants.
ascending	Growing obliquely upward.
asexual	Vegetative reproduction, lacking sexual involvement by sperm or egg cells.
attenuate	Narrowing gradually.
auricle	A small, ear-shaped appendage.
auriculate	Bearing a small, ear-shaped appendage.
autogamous	Self-fertilising flowers.
autotrophic	Of or relating to organisms (as green plants) that can make complex organic nutritive compounds from simple inorganic sources by photosynthesis.
awn	A stiff or bristle like projection often from the tip or back of an organ.

axil	The upper angle between the leaf and the stem.
axis	The longitudinal supporting structure around which organs are borne, e.g., a stem bearing leaves.
barbellate	Barbed, having or covered with protective barbs or quills or spines or thorns or setae.
basal	At the base.
basisropic	Pointing towards the base.
beak	A prominent extension of an organ.
bifid	Deeply split into two lobes.
bifurcate	Divided into two.
biosecurity	Preventing, eradicating, controlling and managing risks posed by pests and diseases.
biotic	Pertaining to the living parts of the environment.
bipinnate	With each primary pinna divided to the midrib into a secondary pinna.
biserrate	Doubly serrate.
blade	The flattened part of a leaf.
blunt	Not pointed at the ends.
bog	A quagmire covered with specialised plants including sphagnum moss, grasses, sedges, rushes, sundews, umbrella ferns and other plants; has wet, spongy ground, a marsh-plant community on wet, very acid peat. Fed only by rainfall.
bottleneck	A genetic term; refers to the fact that in smaller populations there could be lower genetic variability.
brachyblasts	Short shoots.
bract	A reduced leaf or leaf-like structure at the base of a flower.
bracteate	Bearing bracts: leaves or leaf-like structure reduced at the base of a flower.
bracteolate	With small bracts.
bracteole	A small bract.
bracteoles	Bracts directly below the flower.
brevideciduous	Brief (1 month or less) loss of most leaves from the canopy just before flowering or during flushing of a new cohort of leaves.
bryophyte	Plant group including mosses, liverworts and hornworts.
bryophytes	Plant group including mosses, liverworts and hornworts.
bulbil	A bud produced vegetatively on the stem or frond that is capable of breaking off and growing into a new plant.
bullate	With rounded projections covering the surface as if blistered.
caespitose	Growing in dense tufts.
calli	Circular, warty, stalked thickenings commonly found on the lip (labellum) of the orchid (plural of callus).
callose	Hardened or thickened.
callus	Stalked thickening on the lip (labellum) of an orchid.
calyx	The group of sepals, or outer floral leaves, of a flower.
campanulate	Bell-shaped.
canaliculate	With longitudinal channels or grooves.
canopy	The uppermost cover formed by the branches and leaves of trees or the spread of bushes, shrubs and ground covers.
canopy closure	Stage where canopies of shrub and tree species meet.
canopy manipulation	Selectively removing vegetation to create gaps to facilitate natural invasion of native plants, or to plant later successional plants.
capillary	Hair-like.
capitula	Plural of capitulum: A dense head-like inflorescence of many flowers as occurs in most Asteraceae (daisies).
capitulum	A dense head-like inflorescence of many flowers as occurs in most Asteraceae (daisies).
capsule	A dry fruit formed from two or more fused carpels that splits open when ripe.
carbon sinks	Carbon locked away, or sequestered e.g. by trees.
carpel	One unit of the female part of a flower that consists of a basal seed-bearing ovary joined to a receptive stigma by a stalk-like style.

cauda	Tail-like appendage. (pl. caudae; adj. caudate).
caudex	The axis of a woody plant, esp. a palm or tree fern, comprising the stem and root.
cauline	Belonging to the stem, as in cauline leaves emerging from the stem.
cerise	Bright or deep red.
chartaceous	Having a papery texture.
chlorophyll	The green pigment of plants.
chlorotic	Lacking chlorophyll, therefore yellowish, suffering from chlorosis.
cilia	Short small hair-like structures on a cell or microorganism.
ciliate	With small hairs (cilia).
ciliolate	Diminutive of ciliate, i.e., having very small hairs.
cladode	Flattened stem with the function of a leaf.
cladodes	Usually flattened, photosynthetically active branches, these may be leaf-like (e.g., Phyllocladus) or branch-like (e.g., Carmichaelia).
clavate	Club-shaped, gradually widening towards apex.
cleft	Having indentations that extend about halfway to the center, as in certain leaves.
cleistogamous	Flowers that self-fertilise without opening.
coherent	Sticking together of like parts.
column	Stamen and stigmas fused to form a single organ.
columnar	Shaped like a column.
composite	Many small flowers tightly packed together e.g., daisy flowers.
compound	Composed of several similar parts (cf simple).
concave	Curved inward.
concolorous	Of the same colour.
conical	Cone-shaped.
connate	Fusion of like parts.
conspecific	Individuals of the same species.
cordate	Heart-shaped with the notch at the base.
coriaceous	Leather-like; thick, tough, and somewhat rigid.
corolla	The whorl of petals of a flower.
corymb	Modified raceme where stalks of lower flowers are elongated to same level as the upper flowers.
cosmopolitan	A species or other taxonomic group that is distributed widely throughout the world.
costa	The midrib.
crenate	With rounded teeth (bluntly toothed) along the margin.
crisped	Margin tightly wavy or crinkled, curled or wavy.
cristate	With a crest.
crown	The growing point of an upright rhizome or trunk. This usually produces a tuft or ring of fronds.
crura	The two small projections at the mouth of a utricle in Carex.
cucullate	Hood-shaped.
culm	The erect stem of a grass.
cuneate	Wedge-shaped.
cupular	Cup-shaped.
cuttings	Stems and/or leaves taken from plants for propagation.
cyathium	A cup-like structure that surrounds the inflorescence in Euphorbia.
cyme	Inflorescence at the terminus of a branch and where new flowering branches emerge laterally below the flower.
cytorace	Populations (or infraspecific taxa) that differ in chromosome number or chromosome morphology, e.g., <i>Nematoceras trilobum</i> agg. has two cytoraces, a diploid and a tetraploid (in which the chromosomes are doubled).
cytotype	Populations (or infraspecific taxa) that differ in chromosome number or chromosome morphology, e.g., <i>Nematoceras trilobum</i> agg. has two cytotypes, a diploid and a tetraploid (in which the chromosomes are doubled).
deciduous	Marked leaflessness in winter, and greater than 90% leaves lost by beginning of spring flush.

decrecent	Diminishing.
decumbent	With a prostrate or curved base and an erect or ascending tip.
decurrent	Attached by a broadened base.
decurved	Curved downward.
deflexed	Bent abruptly downward.
dehiscence	The time of opening at maturity to release the contents, e.g., a capsule releasing the seeds.
dehiscent	Splitting open at maturity to release contents (of a fruit).
deltoid	Shaped broadly like an equilateral triangle.
dentate	Toothed along the margin with the teeth pointing outward, not forward.
denticles	Minute teeth.
denticulate	Having a very finely toothed margin.
dichotomous	Divided into two equal branches.
digitiform	Finger-like.
dioecious	Having male and female flowers on separate plants of the same species.
diploid	With two complete sets of chromosomes in each cell.
disarticulating	Separating at a joint.
discoïd	Disc-shaped.
disjunct	A species or other taxonomic group that occupies areas that are widely separated and scattered and therefore have a discontinuous distribution.
distal	Toward the apex, away from the point of attachment (cf. proximal).
distichous	In two rows on opposite sides of the axis.
divaricating	Branching at a very wide angle with stiff intertwined stems.
domatia	Small structures on the lower surface of a leaf in some woody dicotyledons, located in the axils of the primary veins and usually consisting of depressions partly enclosed by leaf tissue or hairs.
dorsal	Of the back or outer surface relative to the axis. (cf. ventral).
drupe	A stone fruit, the seed enclosed in a bony covering (endocarp) which is surrounded by a + fleshy layer (mesocarp).
early successional species	Plants which are able to colonise an open area after disturbance but which are often temporary and are replaced by taller plants in time and shaded out.
echinate	Having sharply pointed spines or bristles.
ecological district	A characteristic landscape and biological community defined in the PNA (Protected Natural Area) programme.
ecological restoration	Attempt to reinstate original (pre-disturbance) state of a habitat, plant community or ecosystem.
ecosourced	Plants sourced from seed collected from similar naturally growing plants in the area of the planting site.
ecosourcing	Using native plants grown from locally grown seeds. Eco-sourced plants help to preserve the ecological distinctiveness of an area, and ecosourced plants fare better and are adapted to survive in the local conditions.
eglandular	Without glands.
elaiosome	Fleshy, oil-rich structure attached to seed that attracts ants which act as dispersers.
ellipsoid	Elliptic in long section and circular in cross-section.
elliptic	Broadest at the middle.
emarginate	With a notch at the apex.
emarginated	Having a shallow notch at the tip, as in some petals and leaves.
emergent	In an aquatic sense - wetland herbs that are rooted in the substrate below water level, but carry leaves and stems above the water level e.g. rushes and raupo. Found on the shallow margins of lakes, ponds and waterways. In a forest sense - tree that is appearing above the surrounding canopy.
emergent marginals	An aquatic plant having most of its structure above water. Other aquatic plants are submerged or floating.
endemic	Unique or confined to a place or region, found naturally nowhere else.

endophyte	An endosymbiont (usually a bacterium or fungus) that lives within a plant for at least part of its life without causing any apparent disease.
endophytes	Endosymbionts (usually bacteria or fungi) that live within plants for at least part of their lives without causing any apparent disease.
endosperm	The nutritive tissue of a seed, consisting of carbohydrates, proteins, and lipids.
enrichment planting	Returning to a revegetation site and creating gaps, or filling existing gaps, with different plants of plants, usually later successional plants which may not have survived being planted in the first phases of the project.
ensiform	Sword shaped.
entire	Smooth. Without teeth, notches or divisions.
entomophilous	Pollinated by insects.
epicalyx	Calyx-like structure outside, but close to, the true calyx.
epigeal	Growing on or close to the ground or emerging from the ground after germination (often used for cotyledons).
epiphyte	A plant that grows upon another plant but is not parasitic and does not draw nourishment from it.
epiphytic	Growing upon another plant but not parasitic and not drawing nourishment it.
erose	Irregularly toothed, as if gnawed.
estuarine	Pertaining to the meeting of freshwater and seawater wetlands.
ethnobotany	The study of people's classification, management and use of plants.
eusporangia	Sporangia that arise from groups of epidermal cells.
evanescent	Lasting a very short time or running a short distance.
ex situ	Away from the place of natural occurrence.
ex-situ	Maintenance of plants as live specimens or propagules in cultivation as insurance against the loss of wild populations and as source for material for translocation.
excurrent	Having the axis prolonged to form an undivided main stem or trunk (as in conifers).
extravaginal	Outside an enclosing sheath.
falcate	Hooked or curved like a sickle.
fastigiate	Branches erect and close to central axis.
fen	A type of wet land that accumulates peat deposits. Fens are less acidic than bogs, deriving most of their water from groundwater rich in calcium and magnesium.
ferruginous	Rust-like (a colour term).
fertile frond	Fronds that bear sporangia.
filamentous	Resembling a filament.
filiform	Thread like, resembling a filament.
filiramulate	Branching at a very wide angle with stiff intertwined stems.
fimbriae	Plural of fimbria: Fringe. A fimbria is composed of many fimbriae (individual hair-like structures).
fimbriate	With fringes.
flabellate	Fan shaped.
flaccid	Limp, not rigid, flabby.
flange	A projecting rim.
flexuose	With curves or bends.
floccose	Having tufts of soft woolly hairs.
floret	A small flower, usually one of a cluster - the head of a daisy for example.
foliaceous	Leaf-like.
foliolate	Having leaflets.
founder effect	When a small number of plants (and therefore their genes) from a larger population are selected some genetic information is lost.
frond	A leaf, the complete leaf of a fern including the stipe and lamina.
fulvous	Orange-yellow.
funneliform	Funnel-shaped.
fusiform	Broadest near the middle and tapering toward both ends.
galea	Helmet- or hood-shaped.

galeate	Shaped like a helmet or hood.
gametophyte	A plant that produces sperm and egg cells and in which sexual reproduction takes place - in ferns this is known as the prothallus.
gene pool	The mixture of all genes and gene variations of a group or population.
genetic diversity	The variety of genes in a plants or populations.
genetic variation	Differences displayed by individuals within a plant which may be favoured or eliminated by selection.
geniculate	Abruptly bent.
genus	A taxonomic rank of closely related forms that is further subdivided in to species (plural = genera). In a scientific name (e.g., <i>Sicyos australis</i>), the first word is the genus, the second the species.
gibbous	Swollen or enlarged on one side, as in a gibbous moon.
glabrescent	Lacking hair or a similar growth or tending to become hairless.
glabrous	Without or devoid of hairs, smooth.
gland	A structure that secretes a sticky or oily substance.
glandular	A structure that secretes a sticky or oily substance.
glaucous	Covered with a fine, waxy, removable powder that imparts a white or bluish cast to the surface.
gley	A soil prone to seasonal inundation.
globose	Globe-shaped.
glume	One of two bracts at the base of a grass spikelet.
groundwater	Groundwater is the water beneath the surface that can be collected with wells, tunnels, or drainage galleries, or that flows naturally to the earth's surface via seeps or springs. Groundwater is the water that is pumped by wells and flows out through springs.
gymnosperm	Plants in the class Gymnospermae that have seeds which are not enclosed in an ovary.
gynodioecious	A species population containing plants that produce bisexual (perfect) flowers, and plants that produce only female (pistillate) flowers.
gynoecium	The female reproductive organs of a flower; the pistil or pistils considered as a group. Means literally "womans house" i.e., the overall structure that contains the female sex organs.
hastate	Spear like. Shaped like an arrowhead, but with basal lobes pointing outward rather than downward.
haustorium	The absorbing organ of a parasite or hemiparasite.
hemi-parasite	Obtains water and nutrients from the roots of other plants but also manufactures food through photosynthesis.
hemi-parasitic	Obtaining water and nutrients from the roots of other plants then manufacturing food through photosynthesis.
herbarium	The place where collections of dried/pressed plants are kept.
hermaphrodite	Having both male and female sexual characteristics and organs.
heteroblastic	Exhibiting differences in leaf shapes or forms in juvenile and adult phases of the plant.
heteroblasty	The state of being heteroblastic (i.e., exhibiting differences in leaf shapes or forms in juvenile and adult phases of the plant).
hirsute	Hairy.
hyaline	Membranous, thin and translucent.
hybrid	An individual that is the offspring of a cross between two different varieties or species.
hybridise	Breeding with a member of a different plant or type.
hydrophyte	A plant species adapted to growing in or on water or in wet situations. Aquatic or semi-aquatic.
hymenium	The fertile, spore-bearing layer of a fruitbody.
hypanthium	A ring-like, cup-shaped, or tubular structure of a flower on which the sepals, petals, and stamens are borne.
imbricate	Overlapping.
imbricating	Overlapping.
imparipinnate	Odd-pinnate, a leaf shape; pinnate with a single leaflet at the apex.
in-situ	On site conservation relating to the maintenance of plants in the wild.
inbreeding	Genetic similarity in offspring of closely related individuals.

incoherent	Not sticking together.
incursion	Entrance of a pest into an area where it is not present.
indumentum	A covering of fine hairs (or sometimes scales).
indusia	Plural of indusium, a membrane covering a sorus of a fern.
indusium	A thin tissue that covers the sorus in many ferns. Plural: indusia.
inflorescence	The arrangement of flowers on the stem. A flower head.
infundibuliform	Funnel-like.
interkeel	The space between the keel and the leaf blade.
internode	The part of an axis between two nodes; the section of the stem between leaves.
internodes	Part of a stem between two nodes.
intramarginal	Within or near the margin.
involucral bracts	The scales surrounding the flower head or capitula.
involucre	A group of bracts surrounding a flower head.
involute	With margins rolled inward toward the upper side.
irritable	Responding to touch.
jugate	Paired.
juvenile	A plant of non-reproducing size.
keel	A prominent or obvious longitudinal ridge (as in a boat).
labellar	Pertaining to the labellum: a lip; in orchid flowers referring to the middle petal which usually differs in size, shape or ornamentation from the two lateral petals.
labellum	A lip; in orchid flowers referring to the highly modified middle petal which usually differs in size, shape or ornamentation from the two lateral petals.
lacinia	A jagged lobe.
lacinae	Jagged lobes.
lacinate	Cut into narrow, irregular lobes or segments.
lacustrine	Of or having to do with a lake, of, relating to, or formed in lakes, growing or living in lakes.
lamina	The expanded flattened portion or blade of a leaf, fern frond or petal.
lanceolate	Lance-shaped; of a leaf several times longer than wide with greatest width about one third from the base, tapering gradually to apex and more rapidly to base.
lateral	On or at the side.
lax	With parts open and spreading, not compact.
laxly	With parts open and spreading, not compact.
leaflet	One section of a compound leaf.
lemma	The lower of two bracts enclosing the flower in grasses.
lenticillate	Bark that is covered in fine lenticles (breathing pores).
ligulate	Strap-like, tongue-shaped.
ligule	The membrane between the leaf and the stem of a grass; the "petal" of a ray floret in a composite inflorescence.
linear	Long and narrow with more or less parallel sides.
littoral	Occurring at the border of land and sea (or lake). On or pertaining to the shore. The shallow sunlit waters near the shore to the depth at which rooted plants stop growing.
lobe	A recognisable, but not separated, rounded division or segment of a leaf or pinna. Used to describe ferns and leaves in <i>Cotula</i> and <i>Leptinella</i> .
lobed	Part of a leaf (or other organ), often rounded, formed by incisions to about halfway to the midrib.
lobule	A small lobe or sub-division of a lobe.
lustrous	Glossy, shiny.
lycophytes	Seedless vascular plants that belong to the phylum Lycophyta (characterised by microphylls - primitive leaves found in ancient plants).
lyrate	Pinnatifid or pinnatisect terminal lobe much larger than lower lobes.
maculate	Blotched or spotted.
mangrove	Coastal wetland dominated by Manawa or mangrove <i>Avicennia marina</i> var. <i>resiiifera</i> . Northern New Zealand only, salt marsh replaces it further south.

margin	The edge or border of a leaf.
marine	Pertaining to the sea and saltwater systems.
marsh	A tract of wet land principally inhabited by partially-submerged herbaceous vegetation. Has fewer woody plants than swamper habitats.
mealy	Dry, powdery, crumbly.
median	In the middle.
membranous	Very thin, like a membrane.
mid-lobe	The middle part into which a leaf is divided.
midrib	The central or principal vein of a leaf or pinna of a fern.
mire	Synonymous with any peat-accumulating wetland. Term covers bogs and peaty swamps, fens, carr, moor, muskeg and peatland. Term excludes marsh which is non-peat forming.
molecular techniques	Where proteins and genes are used to investigate plant relationships.
monitoring	Recording of quantitative data over time to document changes in condition or state of species or ecosystems.
monoecious	Having male and female flowers on the same plant of the same species.
montane	Land between 300 and 800 metres above sea level.
mucronate	Tipped with a short, sharp, point.
mucronulate	Having a very small mucro; diminutive of mucronate.
multi-annual evergreen	Overlapping annual cohorts of leaves always present.
multifid	Cleft into many lobes or segments.
multiseptate	With many septa.
muricate	Rough with short, hard points like the shell of Murex, a genus of tropical sea snails with elaborately pointed shells.
mycorrhiza	A symbiotic relationship between a fungus and a plant.
mycorrhizal associations	Symbiotic association between fungi and plant roots which assists plant health by allowing increased ability for uptake of nutrients and promote plant growth.
napiform	A long swollen but tapering root – like a parsnip, or carrot.
native	Naturally occurring in New Zealand (i.e., not introduced accidentally or deliberately by humans).
naturalised	Referring to plants that have escaped from cultivation (including gardens or forest plantations) and can now reproduce in the wild (without human assistance).
nectary	Organ that produces nectar.
nerve	Prominent vein or rib.
nerves	Strands of conducting and usually strengthening tissue in a leaves or similar structures.
net veins	Veins that repeatedly divide and re-unite.
net venation	Feather-like or hand-like venation on a leaf.
nival	Growing at high altitudes. From Latin: nivalis, snowy etc. from nix, nivis, snow.
node	The point at which leaves, branches or roots arise on a stem.
ob-	Prefix meaning inverted, in reverse direction.
obcordate	Heart shaped with the notch at the apex.
oblanceolate	Tapering and widest towards the apex or inversely lanceolate.
oblique	Slanting; of a leaf, larger on one side of the midrib than the other, in other words asymmetrical.
oblong	Rectangular.
obovate	Roughly elliptical or reverse egg shaped and widest near the apex (i.e., the terminal half broader than the basal half).
obtuse	Blunt or rounded at the apex, with the sides meeting at an angle greater than 90°.
operculate	With a small lid.
opposite	A pair of organs attached at nodes in pairs on either side of a stem or axis.
orbicular	Almost or approximately circular.
outbreeding depression	A reduction in vigor of offspring from distant parents. It can occur when a locally adapted population is moved and mixed with plants adapted to different conditions.

outer canopy deciduous	Marked reduction in leaf number in the outer canopy in exposed high light environments over winter.
oval	Planar, shaped like a flattened circle, symmetrical about both the long and the short axis; about twice as long as broad, tapering equally both to the tip and the base. Synonymous with elliptical.
ovary	Part of a flower containing the ovules and later the seeds.
ovate	Egg-shaped and widest at base.
ovoid	Oval; egg-shaped, with rounded base and apex.
pakihi	A term which in its strict sense refers to open clears within forest dominated by low scrub and rushes. However, more usually used to refer natural and induced wetlands and their associated shrublands. A vernacular most frequently used in the West Coast for impoverished soils and their associated peats, left after forest has been cleared.
palea	The small upper bract enclosing the flower of a grass.
palea	1. The upper of the two bracts that enclose each floret in a grass spikelet. 2. A small bract at the base of a disc floret in some plants of the composite family. 3. Scales on various parts of ferns (referred to as paleate or paleaceous). From the Latin word for 'chaff'.
paleae	Plural of palea, from the Latin word for 'chaff'. 1. The upper of the two bracts that enclose each floret in a grass spikelet. 2. A small bract at the base of a disc floret in some plants of the composite family. 3. Scales on various parts of ferns (referred to as paleate or paleaceous).
palmately	Radiating from a point, as fingers radiating from the palm of a hand.
palmatifid	Deeply divided into several lobes arising from more or less the same level.
palmatisect	Intermediate between palmate and palmatifid, i.e. the segments are not fully separated at the base; often more or less digitate.
palustrine	Pertaining to wet or marshy habitats. Term covers mires and marshes.
pandurate	Fiddle-shaped.
panicle	Highly branched (multiple raceme).
papilla	A short rounded projection.
papillae	A soft, fleshy projection, usually small and nipple-like.
papillate	With short rounded projections.
papillose	Warty, with short rounded projections or gland-dotted.
parallel venation	Veins are parallel along leaf.
parasite	An organism that derives all its nourishment from its host.
patent	Spreading or expanded, e.g., spreading petals.
peat	A mass of partially carbonised plant tissue formed by partial decomposition in water of various plants and especially of mosses of the genus Sphagnum, widely found in many parts of the world, varying in consistency from a turf to a slime used as a fertiliser, as stable litter, as a fuel, and for making charcoal. Partially carbonized vegetable matter saturated with water; can be used as a fuel when dried. A type of soil deriving from dead organic material situated in a wet area, where the reduced amount of [[oxygen available in the wet conditions results in the organic material not decomposing as much as it usually would do so in the presence of more oxygen. Used in growing media. Represents an important carbon sink –drainage of peat releases large amounts of carbon (CO ₂) to the atmosphere.
pedicel	The stalk of a single flower in an inflorescence or fruit (either in a cluster or existing singularly).
peduncle	The stalk of a solitary flower or the main stalk of an inflorescence or flower cluster.
pedunculate	Describing fruits, which are borne on a stalk (a peduncle).
pellucid	Transparent.
peltate	Shield-like, with the stalk attached well inside the margin.
pendent	Hanging down from its support.
pendulous	Hanging or drooping.
penicillate	With a tuft of hairs at the end, like a brush.
perennial	A plant lasting for three seasons or more.
perianth	A collective term for the calyx (sepals or tepals) and corolla (petals) of the flower, especially when these are indistinguishable.
petal	Part of flower inside the sepals; usually coloured.
petiolate	Having a petiole.

petiole	Leaf stalk.
phloem	The vascular tissue in land plants that is primarily responsible for the distribution of sugars and nutrients manufactured in a shoot.
photopoint	A monitoring technique where repeat photos are taken of the same scene from the same point over a period of time in order to quantify changes.
pilose	Bearing long, soft hairs.
pinna	A segment of a divided lamina that is classified as primary, secondary or tertiary according to the degree of dissection of the lamina.
pinnae	Divisions of a pinnate leaf.
pinnate	With leaflets arranged regularly in two rows on either side of a stalk as in a feather; the lamina on a fern is divided into separate pinnae.
pinnatifid	Pinnately lobed, cleft more than halfway to the midrib. Not cleft all the way to the rachis.
pinnatisect	Pinnately divided almost to midrib but segments still confluent.
pioneer	Plant species are hardy species that should be planted first to establish a good canopy cover that restricts weed growth and promotes natural regeneration. In natural ecosystems these are the first plants to arrive and grow on a site.
pistil	The female reproductive organ of a flower, consisting of an ovary, style, and stigma.
pistillate	A flower with one or more pistils, but no stamens.
plano-convex	Flat on one side, convex on the other.
plumose	Feathery.
podzol	Infertile, acidic soil, strongly leached to form a whitish-grey subsoil underlain by a layer enriched in iron, aluminium and organic matter; usually under forest in a wet temperate climate.
pole	A subcanopy size individual with a long thin trunk and foliage tuft of a potential canopy tree.
pollinia	Compact masses of orchid pollen.
population enhancement	Increasing a population for a specific biological purpose, e.g., when a species is already present in an area but extra individuals are added to address a sex imbalance.
porrect	Extending forward.
procumbent	Lying and flat along the ground but not rooting.
propagate	To reproduce a plant by sexual (i.e., from seed) or asexual (e.g., from cuttings) means.
prostrate	A general term for lying flat along the ground. This includes procumbent (that is lying and flat along the ground but not rooting) and decumbent (with a prostrate or curved base and an erect or ascending tip).
provenance	The place of origin (of a plant that is in cultivation).
proximal	Toward the base or point of attachment (cf. distal).
pseudobulb	Thickened surface stem; usually looking like a bulb.
pseudoterminal	Falsely terminal – as in a bud which appears to occupy a terminal position but does not.
puberulent	Minutely clad in short, soft hairs.
pubescence	Covering of soft, fine hairs.
pubescent	Covered in short, soft hairs.
pungent	Ending in a stiff sharp point.
pustule	Small blister-like elevation.
quadrate	Square, rectangular.
raceme	An unbranched, elongated inflorescence with pedicellate flowers maturing from the bottom upward i.e., flowers attached to the main stem by short stalks.
rachis	The axis of an inflorescence or of a compound leaf.
ray	An outer ring of strap-like florets in the head of Asteraceae (daisy) flowers.
re-introduction	Translocating wild or cultivated individuals to sites where the taxon has been known to occur in the past, but from which it has disappeared.
recurved	Curved backward.
reflexed	Bent back on itself.
reniform	Kidney shaped.
repand	With a slightly wavy margin.
replum	The outer structure of a pod in which the valves have dehisced (persists after the opening of the fruit).

restiad	Area dominated by rush-like plants (collectively known as restiads) of the family Restionaceae. Includes Chatham Island and North Island Sporodanthus and oioi (<i>Apodasmia similis</i>).
retorse	Pointing backward.
retuse	A shallow notch at the rounded or blunt apex of a leaf.
rhizoid	Any of various slender filaments that function as roots in mosses and ferns and fungi.
rhizomatous	With underground creeping stems.
rhizome	An underground stem (usually spreading horizontally or creeping) or short and erect.
rhombic	Diamond-shaped.
rhomboid	Diamond shaped, nearly rhombic.
riparian	Relating to or living or located on the bank of a natural watercourse (as a river) or sometimes of a lake or a tidewater.
riparian margin	Refers to the edges of streams, rivers, lakes or other waterways.
riparian plants	Refers to plants found growing near the edges of streams, rivers or other waterways.
riparian zone	A strip of land next to streams, rivers, and lakes where there is a transition from terrestrial (land vegetation) to aquatic (water) vegetation. Also known as "berm".
riverine	Pertaining to rivers, streams and such like flowing water systems.
rootstock	A short, erect, underground stem.
rosette	A radiating cluster of leaves.
rostellum	In orchids, a modified stigma that prevents self-fertilisation.
rosulate	A dense radiating cluster of leaves.
rugose	Wrinkled.
rugulose	Having small wrinkles.
runcinate	Sharply pinnatifid or cleft, the segments directed downward.
runner	A trailing stem that roots at the nodes.
rupestral	Growing on rocks.
rushes	A group of distinctive wetland plants. They have solid stems (grasses have hollow stems), true rushes <i>Juncus</i> sp. have rounded leaves.
sagittate	Shaped like the head of an arrow; narrow and pointed but gradually enlarged at base into two straight lobes directed downwards; may refer only to the base of a leaf with such lobes; cf. hastate.
salt marsh	A coastal wetland, with specialized salt tolerant plants (halophytes).
sapling	A juvenile tree that has reached the stage of 1 or 2 main stems but is still in the shrub layer.
saprophyte	A plant lacking chlorophyll and living on dead organic matter.
saprophytic	Lacking chlorophyll and living on dead organic matter.
sarcotesta	The fleshy, often highly coloured outer layer of the seed coat in some species, e.g., titoki (<i>Alectryon excelsus</i>).
scabrid	Roughened or rough with delicate and irregular projections.
scale	Any thin, flat, membranous structure.
scape	A leafless flower stem.
schizocarp	A fruit which splits when dry, from the Greek <i>skhizein</i> 'split' and <i>karpos</i> 'fruit'.
schizocarps	Plural of schizocarp, a fruit which splits when dry, from the Greek <i>skhizein</i> 'split' and <i>karpos</i> 'fruit'.
scutiform	Shield-shaped.
sedges	A group of grass-like or rush-like herbaceous plants belonging to the family Cyperaceae. Many species are found in wetlands some are forest floor plants. Leaves are usually angular. Hence the saying "rushes are round and sedges have edges".
seedling	A newly germinated plant.
self sustaining	Able to sustain itself, or replace itself, independently of management i.e. regenerate naturally.
self thinning	Natural tree death in a crowded, even-aged forest or shrubland.
semi-deciduous	Partial leaflessness in winter, and greater than 50% leaves lost by the beginning of spring flush.
sepal	Outer part of flower; usually green.
serrate	Sharply toothed with teeth pointing forwards towards apex.
serrulate	Finely serrate, i.e., finely toothed with asymmetrical teeth pointing forward; like the cutting edge of a saw.

sessile	Attached by the base without a stalk or stem.
seta	The stalk of a fruiting moss capsule.
sheath	A portion of an organ that surrounds (at least partly) another organ (e.g., the tubular envelope enclosing the stem in grasses and sedges).
silicles	The flattened usually circular capsule – compared with the narrow, elongated fruit (silique) – containing the seed/seeds. A term used almost exclusively for plants within the cabbage family (Brassicaceae).
silique	A capsule, usually 2-celled, with 2 valves falling away from a frame (replum) bearing.
simple	Of one part; undivided (cf compound).
sinuate	With a wavy margin.
sinus	The space or recess between lobes; in hebes a gap between the margins of two leaves of an opposite pair that may be present in the bud before the pair of leaves separate.
sorus	A cluster of two or more sporangia on the margin or underside of the lamina of a fern, sometimes protected by an indusium.
spathulate	Spatula or spoon-shaped, a rounded blade tapering gradually to the base.
spheroidal	Almost spherical but elliptic in cross section.
spicate	Arranged in a spike.
spike	Flowers attached to main stem without stalks.
spikelet	Collection of individual grass florets borne at the end of the smallest branch of the inflorescence.
sporangia	Plural of sporangium. Structures in which spores are produced.
sporangium	Structure in which spores are produced.
spore	A single-celled reproductive unit similar in function to that of the seed in a flowering plant.
sporophyte	The spore producing plant in ferns that is usually the visible part.
stamen	The male reproductive organ of a flower where pollen is produced. Consists of an anther and its stalk.
stamens	The male, pollen bearing organ of a flower.
standing water	Where water lies above the soil surface for much of the year.
stellate	Irregularly branched or star shaped.
stigma	Female part of the flower that is receptive to pollen, usually found at or near the tip (apical end) of the style where deposited pollen enters the pistil.
stipe	The stalk of a frond.
stipitate	Borne on a stipe or stalk.
stipulate	A leaf with stipules.
stipule	A scale-like or leaf-like appendage at the base of a petiole, usually paired.
stolon	A stem which creeps along the ground, or even underground.
stoloniferous	Producing stolons.
stramineous	Chaffy, like straw or straw-colored.
stria	A fine line or groove.
striae	Fine lines or grooves.
striate	Fine longitudinal lines or minute ridges.
style	The elongated part of the flower between the ovary and the stigma.
sub-	A prefix meaning under, somewhat or almost.
subglabrous	Very slightly, but persistently, hairy.
suborbicular	Slightly rounded in outline.
substrate	The surface upon which an orchid grows.
subtended	Immediately beneath, occupying a position immediately beneath a structure, i.e., flower subtended by bract.
subulate	Slender and tapering to a point.
succession	Progressive replacement of one species or plant community type by another in an ecosystem.
successional	Referring to species, plant communities or habitats that tend to be progressively replaced by another.
succulent	Fleshy and juicy.

summer-green	Used in New Zealand to indicate herbs or sub-shrubs that die down to a root stock or rhizomatous network.
supplementary planting	Returning to a revegetation site and creating gaps, or filling existing gaps, with different plants of plants, usually later successional plants which may not have survived being planted in the first phases of the project.
surface water	Water present above the substrate or soil surface.
surveillance	Regular survey for pests inside operational and managed areas e.g. nurseries, standout areas on parks.
survey	Collection of observations on the spatial distribution or presence or absence of species using standardised procedures.
sustainable land management	The use of farming practices which are sustainable both financially and environmentally including management of nutrient runoff, waste disposal or stock effluent, reducing impacts of nutrients on waterways, preventing erosion and soil loss, and protecting native forest and wetland habitats from stock damage.
swamp	Low land that is seasonally flooded; has more woody plants than a marsh and better drainage than a bog. They are more fertile and less acidic than bogs because inflowing water brings silt, clay and organic matter. Typical swamp plants include raupo, purei and harakeke (flax). Zonation and succession often leads through manuka to kahikatea swamp forest as soil builds up and drainage improves.
symbiote	An organism that has an association with organisms of another species whereby the metabolic dependence of the two associates is mutual.
symbiotic	The relation between two different species of organisms that are interdependent; each gains benefits from the other (see also symbiosis).
sympatric	Occupying the same geographical region.
synangia	Structures made up of fused sporangia.
synonym	A botanical name that also applies to the same taxon.
systematics	The study of taxonomy, phylogenetics, and taxagenetics.
tabular	Shaped like a rectangular tablet.
taxa	Taxonomic groups. Used to refer to a group at any level e.g., genus, species or subspecies.
taxon	A taxonomic group. Used to refer to a group at any level e.g., genus, species or subspecies.
taxonomy	The process or science of classifying, naming, and describing organisms.
tepal	An individual member of the perianth.
terete	Cylindrical and tapering.
terminal	At the tip or apex.
ternatifid	Leaflets in threes,.
tetrad	A group of four.
tomentum	A hairy covering of short closely matted hairs.
translocation	The movement of living organisms from one area to another.
trifid	Divided into three.
trifoliate	Having three leaflets.
trigonus	Three-angled.
tripinnate	With each secondary pinna divided to the midrib into tertiary pinnae.
triquetrous	Triangular in cross section and acutely angled.
truncate	With the apex or base squared at the end as if cut off.
tuberculate	Bearing small swellings.
tubular	Tube-shaped.
turbinate	Top-shaped.
turgid	Distended through internal pressure.
type locality	The place or source where a holotype or type specimen was found for a species.
ultramafic	A type of dark, usually igneous, rock that is chemically dominated by magnesium and iron-rich minerals, the partially metamorphosed form of which is serpentinite.
umbel	Umbrella like; the flower stalks arise from one point at the stem.
undulate	Wavy edged.
undulose	Wavy edged.

unitubular	A tube partitioned once – literally one tube (compare – multitubular – many tubes).
utricle	A thin loose cover enveloping some fruits (eg., Carex, Uncinia).
valvate	Opening by valves.
vascular plant	A plant that possesses specialised conducting tissue (xylem and phloem). This includes flowering plants, conifers and ferns but excludes mosses, algae, lichens and liverworts.
velutinous	Thickly covered with delicate hairs; velvety.
ventral	Of the front or inner (adaxial) surface relative to the axis. (cf. dorsal).
vermiform	Worm-shaped.
vernucose	Glossy, literally as if varnished, e.g., Hebe vernucosa has leaves than appear as if varnished.
verrucose	Having small rounded warts.
verticillium	A fungus disease that will cause wilting and death.
villous	Covered with long, soft, fine hairs.
water table	The level at which water stays in a soil profile. The zone of saturation at the highest average depth during the wettest season.
wetland	A site that regularly has areas of open water for part or all of the year, or has a water table within 10 cm of the surface for at least 3 months of the year. Wetland ecosystems support a range of plant and animal species adapted to a aquatic or semi-aquatic environment.
whipcord	A shrub in which the leaves are reduced to scales that are close-set and pressed against the stem.
whorl	A ring of branches or leaves arising at the same level around the stem of a plant.
whorled	Aranged in a ring around the stem.