

# My hutt to d

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Made on the New Zealand Plant Conservation Network website:  $\underline{www.nzpcn.org.nz}$ 

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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-vascualr 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 encompases the Kermadec, Manawatawhi/Three Kings, North, South, Stewart Island/Rakiura, Chatham, Antipodes, Bounties, Snares, Auckland Campbell island/Motu Ihupuku and Macquarie.

#### **ABOUT THE NETWORK**

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

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

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

That work has included:

- Training people in plant conservation
- Publishing plant books, reports and posters
- Raising money for the David Given Threatened Plant Research Trust to pay for plant conservation research scholarships
- 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 Zeland mosses (Rolfe et al., 2016) as well as horworts and liverworts (de Lange et al., 2015).

# **Anisotome flexuosa**

#### **FAMILY**

Apiaceae

#### **AUTHORITY**

Anisotome flexuosa J.W.Dawson

#### FLORA CATEGORY

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

No

#### **ENDEMIC FAMILY**

No

#### STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

#### **NVS CODE**

**ANIFLE** 

#### **CHROMOSOME NUMBER**

2n = 22

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### LIFE CYCLE

Winged mericarps are dispersed by wind (Thorsen et al., 2009).

#### **ETYMOLOGY**

anisotome: Unequal sided

flexuosa: Flexuous

#### REFERENCES AND FURTHER READING

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

#### MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/anisotome-flexuosa/



Mt Burns, January. Photographer: John Smith-Dodsworth



Arthur's Pass National Park. Photographer: Jane Gosden

# **Anisotome aromatica**

#### **COMMON NAME**

aromatic aniseed, kopoti, common aniseed

#### **FAMILY**

**Apiaceae** 

#### **AUTHORITY**

Anisotome aromatica Hook.f.

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

Nο

#### **ENDEMIC FAMILY**

Nο

#### STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

#### **NVS CODE**

**ANIARO** 

#### **CHROMOSOME NUMBER**

2n = 22

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened 2004 | Not Threatened

#### **FLOWER COLOURS**

White

#### LIFE CYCLE

Winged mericarps are dispersed by wind (Thorsen et al., 2009).

#### **ETYMOLOGY**

anisotome: Unequal sided

aromatica: Aromatic

#### REFERENCES AND FURTHER READING

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

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/anisotome-aromatica/



Mangatepopo, November. Photographer: John Smith-Dodsworth



Anisotome aromatica. Photographer: Jane Gosdan

# Cardamine bilobata

#### **COMMON NAME**

native bittercress

#### **SYNONYMS**

None

#### **FAMILY**

Brassicaceae

#### **AUTHORITY**

Cardamine bilobata Kirk

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

No

#### **ENDEMIC FAMILY**

No

#### STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

#### **NVS CODE**

CARBIL

#### **CHROMOSOME NUMBER**

2n = 48

#### **CURRENT CONSERVATION STATUS**

2018 | Threatened - Nationally Critical

#### **PREVIOUS CONSERVATION STATUSES**

2012 | At Risk – Naturally Uncommon | Qualifiers: RR, Sp

2009 At Risk – Naturally Uncommon

2004 Data Deficient

# Photographer: Peter Heenan

Photographer: Peter Heenan

#### **DISTRIBUTION**

Endemic to the eastern South Island. North-west Nelson and east of the main divide.

#### **HABITAT**

Mainly low alpine 900-1500m altitude. Usually in fellfield, on moraine or scree edges, or rock crevices, also damp places in tussock grassland.

#### **FEATURES**

Low growing herb with single rosettes or in small clumps. Leaves deeply three lobed, sometimes with additional pair of leaflets; dull green to purplish, thin, fleshy, hairless. Flower stems sparsely branched, hairless, up to 30cm tall. Flowers large, white, about 8mm across, 4-petalled with 6 stamens. Seeds up to 1mm long, pale brown, oblong, in slender linear pods up to 2.5cm long.

#### **SIMILAR TAXA**

Cardamine corymbosa Hook.f., and C. aff. bilobata. From C. corymbosa it differs by its larger fruits, and three lobed leaves. C. aff. bilobata differs by its entire, unlobed leaves.

#### **FLOWERING**

January to February

#### **FLOWER COLOURS**

White

#### **FRUITING**

January to February

#### LIFE CYCLE

Seeds are dispersed by ballistic projection, water and attachment (Thorsen et al., 2009).

#### **PROPAGATION TECHNIQUE**

Easily grown from fresh seed.

#### **THREATS**

Based on herbarium evidence it would seem that the species was more widespread and common than it is now. Being a cress it is highly palatable, and it may have declined as a result of browsing pressure. The species is also considered to be quite elusive (P.B. Heenan pers. comm.) and is rarely seen even in apparently suitable habitat.

#### **ETYMOLOGY**

cardamine: From the Greek name kárdamon, referring to an Indian spice

#### **ATTRIBUTION**

Fact sheet prepared by P.J. de Lange for NZPCN (1 June 2013)

#### REFERENCES AND FURTHER READING

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

#### **CITATION**

Please cite as: de Lange, P.J. (Year at time of access): Cardamine bilobata Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <a href="https://www.nzpcn.org.nz/flora/species/cardamine-bilobata/">https://www.nzpcn.org.nz/flora/species/cardamine-bilobata/</a> (Date website was queried)

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/cardamine-bilobata/

# Anisotome imbricata var. imbricata

#### **FAMILY**

Apiaceae

#### **AUTHORITY**

Anisotome imbricata (Hook.f.) Cockayne var. imbricata

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

No

#### **ENDEMIC FAMILY**

No

#### STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened 2004 | Not Threatened

#### **FLOWER COLOURS**

Yellow

#### LIFE CYCLE

Winged mericarps are dispersed by wind (Thorsen et al., 2009).

#### **ETYMOLOGY**

anisotome: Unequal sided

imbricata: From the Latin imbricatus 'tiled', refers to overlapping features such as leaves

#### REFERENCES AND FURTHER READING

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

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/anisotome-imbricata-var-imbricata/



Old man range, January. Photographer: John Smith-Dodsworth



Old man range, January. Photographer: John Smith-Dodsworth

# **Anisotome pilifera**

#### **FAMILY**

Apiaceae

#### **AUTHORITY**

Anisotome pilifera (Hook.f.) Cockayne & Laing

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

No

#### **ENDEMIC FAMILY**

No

#### STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

#### **NVS CODE**

**ANIPIL** 

#### **CHROMOSOME NUMBER**

2n = 22

#### **CURRENT CONSERVATION STATUS**

2018 At Risk - Declining

#### **PREVIOUS CONSERVATION STATUSES**

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

#### **FLOWER COLOURS**

White

#### LIFE CYCLE

Winged mericarps are dispersed by wind (Thorsen et al., 2009).

#### **ETYMOLOGY**

anisotome: Unequal sided

pilifera: Hair-bearing; having soft short hairs

#### REFERENCES AND FURTHER READING

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

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/anisotome-pilifera/



Hooker valley, December. Photographer: John Smith-Dodsworth



Mt Cook. Photographer: John Barkla

# Celmisia angustifolia

#### **COMMON NAME**

strap-leaved daisy

#### **SYNONYMS**

None

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Celmisia angustifolia Cockayne

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

Nο

#### **ENDEMIC FAMILY**

Nο

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **NVS CODE**

**CELANG** 

#### **CHROMOSOME NUMBER**

2n = 108

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### **DISTRIBUTION**

Endemic. South Island: Easterly from south Marlborough to Otago

#### **HABITAT**

Montane to alpine in grassland, fell field and at the base of stable talus and scree slopes

#### **FEATURES**

Small subshrub with woody, often multicipital, stock; branches close-set, clad in persistent, imbricate leaf-remnants; living leaves rosulate at tips of branchlets. Lamina coriaceous, not or only slightly viscid,  $25-50 \times 2-6$  mm, linear to linear-spathulate; upper surface clad in thin  $\pm$  deciduous pellicle; lower in appressed somewhat soft to satiny white tomentum; midrib pale, usually evident; apex obtuse to subacute; margins entire or minutely denticulate. Base suddenly expanded into sheath  $\pm$  15  $\times$  5-6 mm, glabrous, transculent, longitudinal veins fine. Scape slender, viscid, up to c. 150 mm long; bracts linear-subulate, remote, lower with lamina c.20 mm long. Capitula 20-40 mm diameter. Involucral bracts c.10 mm. long, linear-lanceolate, indurated towards base and pale brown, with very prominent midrib; upper half thin, floccose on margins and  $\pm$  viscid. Ray-florets c.16 mm long, white, linear,  $\pm$  glandular, limb much recurved when dry, apex 3-4-toothed. Disk-florets c.6 mm long, very narrow-funnelform, teeth c.1 mm long, ovate-triangular. Achenes c.3 mm long, cylindric, ribs densely clad in rather long ascending silky hairs. Pappus-hairs up to c.5 mm long, white, slender, very finely barbellate.



Pisa range, January. Photographer: John Smith-Dodsworth



East Ahuriri. Photographer: John Barkla

#### **SIMILAR TAXA**

Allied to Celmisia viscosa from which it differs by the scarcely ribbed, smaller leaves (25-50  $\times$  2-6 mm cf. 60-150  $\times$  6-9 mm) which are not or only slightly viscid.

#### **FLOWERING**

October - January

#### **FLOWER COLOURS**

White, Yellow

#### **FRUITING**

November - April

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **PROPAGATION TECHNIQUE**

Unknown. Probably best grown from fresh seed and like many Celmisia this species will probably dislike high humidity and drying out

#### **ETYMOLOGY**

**celmisia**: Apparently named after Kelmis, one of Idaean Dactyls, a group of skilled mythical beings associated with the Mother Goddess Rhea in Greek mythology. Kelmis, whose name means 'casting', was a blacksmith and childhood friend of Zeus, son of Rhea and later king of the gods. In Ovid's 'Metamorphoses', Kelmis is described as offending Zeus who turned him into adamant so he was as hard as a tempered blade **angustifolia**: Narrow-leaved

#### WHERE TO BUY

Not commercially available.

#### **ATTRIBUTION**

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

#### REFERENCES AND FURTHER READING

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

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/celmisia-angustifolia/

# Celmisia bellidioides

#### **COMMON NAME**

green cushion mountain daisy

#### **SYNONYMS**

None

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Celmisia bellidioides Hook.f.

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

Nο

#### **ENDEMIC FAMILY**

Nο

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **NVS CODE**

**CELBEL** 

#### **CHROMOSOME NUMBER**

2n = 108

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### **DISTRIBUTION**

Endemic. South Island: from Nelson and Marlborough to Southland.

#### HABITAT

Montane to subalpine in wet rocky and gravelly places in gorges and along streamsides. Often near waterfalls

#### **FEATURES**

Creeping much-branched mat-forming herb; main stems slender to rather stout, slightly woody at base; branches much-divided, prostrate, rooting, clad in long persistent leaf-remnants; branchlets clad at apex in close rosettes of spreading living leaves. Lamina subcoriaceous, almost fleshy, glabrous, narrowly obovate-oblong to oblong to spathulate, 7-15 × 3-6 mm; upper surface dark green, glossy; lower paler; midrib impressed above, prominent below. Apex rounded; margins entire or sometimes obscurely toothed, narrowed to ± floccose sheath c.5 mm long. Scape slender, up to c.50 mm long, glabrous or with sparse white hairs; bracts numerous, narrow-linear, obtuse to subacute, lower up to c.10 mm long. Capitula c.20 mm diameter; involucral bracts green or pale-green, linear- to lanceolate-oblong, glabrous, thin, up to 10 mm. long. Ray-florets numerous, c.11 mm long; tube very slender, occasionally with sparse hairs; limb narrow-obovate. Disk-florets narrow-funnelform, c.6 mm long; teeth minute, triangular. Achenes compressed-cylindric, ribbed, 3-4 mm long, ± densely clad in short ascending silky hairs. Pappus-hairs up to 5 mm long, slender, white to rufous, very finely or hardly barbellate



Temple Basin, January. Photographer: John Smith-Dodsworth



In cultivation. Photographer: John Barkla

#### **SIMILAR TAXA**

Most similar to the naturally uncommon, Eyre Range endemic Celmisia thomsonii from which it is easily distinguished by its dark to light green, glossy upper leaf surfaces and uniformly white ray-florets. The upper leaf surface of Celmisia thomsonii is dull green, and the ray-florets are often tinged pink.

#### **FLOWERING**

November - February

#### **FLOWER COLOURS**

White, Yellow

#### **FRUITING**

December - March

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **PROPAGATION TECHNIQUE**

Difficult. Best grown from fresh seed. Can be grown by dividing established plants. Does best in a shaded site planted within a permanently moist, free draining soil.

#### **ETYMOLOGY**

**celmisia**: Apparently named after Kelmis, one of Idaean Dactyls, a group of skilled mythical beings associated with the Mother Goddess Rhea in Greek mythology. Kelmis, whose name means 'casting', was a blacksmith and childhood friend of Zeus, son of Rhea and later king of the gods. In Ovid's 'Metamorphoses', Kelmis is described as offending Zeus who turned him into adamant so he was as hard as a tempered blade

bellidioides: Like Bellis, the English daisy

#### WHERE TO BUY

Occasionally available from specialist native plant nurseries.

#### **ATTRIBUTION**

Description adapted from Allan (1961)

#### REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/celmisia-bellidioides/

# Celmisia gracilenta

#### **COMMON NAME**

common mountain daisy, pekapeka

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Celmisia gracilenta Hook.f.

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

Nο

#### **ENDEMIC FAMILY**

No

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **NVS CODE**

**CELGRA** 

#### **CHROMOSOME NUMBER**

2n = 108

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### **FLOWER COLOURS**

White, Yellow

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **ETYMOLOGY**

**celmisia**: Apparently named after Kelmis, one of Idaean Dactyls, a group of skilled mythical beings associated with the Mother Goddess Rhea in Greek mythology. Kelmis, whose name means 'casting', was a blacksmith and childhood friend of Zeus, son of Rhea and later king of the gods. In Ovid's 'Metamorphoses', Kelmis is described as offending Zeus who turned him into adamant so he was as hard as a tempered blade

gracilenta: Slender



Desert Road. Photographer: Jeremy Rolfe



Desert Road. Photographer: Jeremy Rolfe

#### REFERENCES AND FURTHER READING

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



# Celmisia haastii var. haastii

#### **COMMON NAME**

Haast's mountain daisy

#### **SYNONYMS**

None

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Celmisia haastii Hook.f. var. haastii

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

Nο

#### **ENDEMIC FAMILY**

Nο

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **NVS CODE**

**CELHVH** 

#### **CHROMOSOME NUMBER**

2n = 108

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### **DISTRIBUTION**

Endemic. South Island, occurring south from about North Canterbury.

#### HABITAT

Montane to alpine. Inhabiting grassland, herbfield, fellfield and other moist rocky places.

#### **FEATURES**

Rather stout low-growing branching grey-green subshrub forming small to large patches; branchlets ascending to erect, lower parts covered by leaf remnants, upper part obscured by rosette-leaves. Lamina  $30-80 \times 10-28$  mm, broadly elliptic-oblong to obovate-spathulate, subcoriaceous to coriaceous; upper surface glabrous, usually longitudinally furrowed, pale green; lower surface clad in closely appressed  $\pm$  satiny tomentum, midrib tomentose but  $\pm$  evident; apex obtuse to subacute; margins slightly recurved, very minutely distantly denticulate, cuneately narrowed to winged petiole c. 5 mm long. Sheath delicate, pale yellowish green,  $\pm$  20-30  $\times$  5 mm; veins evident. Scape c. 50-150 mm long, densely tomentose to almost glabrous, rather stout to slender; bracts several or numerous, linear-subulate, acute to subacute, up to c. 2 mm long or more. Capitula 25-40 mm diameter; involucral bracts linear-lanceolate, membranous, softly hairy without, up to c. 12 mm long. Ray florets 15-20 mm long; limb narrow-oblong to narrow obovate-oblong, 3-5 toothed. Disk-florets funnelform, shortly 5-toothed, 6-8 mm long. Achenes narrow-cylindric, glabrous, 3-4 mm long. Pappus-hairs up to 5-6 mm long, very finely barbellate



Pisa range, January. Photographer: John Smith-Dodsworth



Hector Mountains. Photographer: John Barkla

#### SIMILAR TAXA

Allied to C. discolor, C. incana, C. angustifolia, C. durietzii, C. lindsayi, C. bonplandii, C. hectorii and C. cockayneana. Of these Allan (1961) considered it closest to C. durietzii and C. cockayneana. From C. durietzii, C. haastii differs by the glabrous achenes and longer, wider leaves ( $30-80 \times 10-28 \text{ mm}$  cf.  $30-60 \times 7-10 \text{ mm}$ ) and pale yellowish-green rather than translucent sheath. From C. cockayneana it differs by the glabrous rather than hairy ahcenes and shorter, broader leaves ( $30-80 \times 10-28 \text{ mm}$  cf.  $40-100 \times 10-15 \text{ mm}$ ). Celmisia cockayneana a Marlborough endemic grows well north of the range of C. haastii. For distinctions between C. haastii var. haastii and var. tomentosa see var. tomentosa

#### **FLOWERING**

October - January

#### **FLOWER COLOURS**

White, Yellow

#### **FRUITING**

December - March

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **PROPAGATION TECHNIQUE**

Difficult. Best grown from fresh seed. Dislikes humidity.

#### **ETYMOLOGY**

**celmisia**: Apparently named after Kelmis, one of Idaean Dactyls, a group of skilled mythical beings associated with the Mother Goddess Rhea in Greek mythology. Kelmis, whose name means 'casting', was a blacksmith and childhood friend of Zeus, son of Rhea and later king of the gods. In Ovid's 'Metamorphoses', Kelmis is described as offending Zeus who turned him into adamant so he was as hard as a tempered blade **haastii**: Honours the New Zealand geologist and botanist Sir Julius von Haast (1822-87)

#### WHERE TO BUY

Not commercially available.

#### **ATTRIBUTION**

Description adapted from Allan (1961)

#### REFERENCES AND FURTHER READING

Allan, H. H. 1961: Flora of New Zealand. Vol. I. Government Printer, Wellington Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/celmisia-haastii-var-haastii/

# Celmisia incana

#### **COMMON NAME**

white mountain daisy

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Celmisia incana Hook.f.

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

Nο

#### **ENDEMIC FAMILY**

Nο

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **NVS CODE**

CELINC

#### **CHROMOSOME NUMBER**

2n = 108

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 Not Threatened

2004 | Not Threatened



Jacks Pass, January. Photographer: John Smith-Dodsworth



Ruahine Range, near Sunrise Hut. Photographer: John Sawyer

#### **DISTRIBUTION**

Endemic. North and South Islands from Te Moehau (Coromandel Peninsula) south to Otago

#### **HABITAT**

Montane to alpine in grassland, herbfield, boulderfield, on rock outcrops and tors and other similar rocky places.

#### **FEATURES**

Stems stout, woody, up to ± 100 mm diameter; branches stout, woody, clad in long-persistent reflexed leaves; living leaves in close rosettes, patent. Lamina 20-40 × 10-15 mm, obovate-oblong, coriaceous; upper surface ± densely clad in appressed white tomentum forming a pellicle; lower surface densely clad in similar but more appressed tomentum, midrib evident to obscured; apex subacute to obtuse, often apiculate; margins very slightly recurved, remotely denticulate, narrowed to very short petiole up to 5 mm wide, or sometimes directly into thin almost glabrous striate sheath c.10-15 × 7-10 mm. Scape slender, up to 120 mm long, often short at flowering stage, densely clad in floccose hairs. Capitula 25-35 mm diameter; involucral bracts linear-subulate, many, 10-15 mm long, floccose on outer surface, glandular near apex. Ray-florets narrow, up to 12 mm long, white; limb gradually widening to apex. Disk-florets funnelform, c.7-8 mm. long, teeth narrow-triangular; anthers usually distinctly but shortly tailed. Achenes 3.0-3•5 mm long, compressed-cylindric; ribs rather obscure, clad in rather stiff ascending hairs. Pappus of white or sordid-white slender, minutely barbellate hairs up to 7-8 mm long.

#### SIMILAR TAXA

Easily recognised by the silvery white leaves which are hairy on both sides. It is most likely to be confused with Celmisia hectorii which has also has silvery white hairy leaves but in that species the leaves are linear-spathulate, linear-oblong to linear-obovate instead of obovate-oblong. Celmisia allanii regarded by some New Zealand botanists as distinct is seen here as part of the natural variation of C. incana. From C. incana it is said to differ by having smaller leaves, and by the tomentum of the underleaves being floccose rather than satiny but the distinctions are not clear cut.

#### **FLOWERING**

September - March

#### **FLOWER COLOURS**

White, Yellow

#### **FRUITING**

November - May

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **PROPAGATION TECHNIQUE**

Best grown in non-humid climates. Celmisia incana is one of the few Celmisia that generally grows well in most garden conditions. However, it can be fickle. Best grown from fresh seed and planted in a fertile, free draining semi-shaded situation. Dislikes excessive moisture, and humidity.

#### **ETYMOLOGY**

**celmisia**: Apparently named after Kelmis, one of Idaean Dactyls, a group of skilled mythical beings associated with the Mother Goddess Rhea in Greek mythology. Kelmis, whose name means 'casting', was a blacksmith and childhood friend of Zeus, son of Rhea and later king of the gods. In Ovid's 'Metamorphoses', Kelmis is described as offending Zeus who turned him into adamant so he was as hard as a tempered blade **incana**: Hoary (greyish white haired)

#### WHERE TO BUY

Occasionally available from specialist native plant nurseries.

#### **NOTES ON TAXONOMY**

Celmisia allanii W.Martin is sometimes included within C. incana by New Zealand botanists. But this informal view has yet to be properly tested taxonomically. For this reason C. allanii is regarded as distinct from C. incana.

#### **ATTRIBUTION**

P.J. de Lange (7 April 2009). Description adapted from Allan (1961)

#### REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

#### **CITATION**

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#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/celmisia-incana/

# Celmisia laricifolia

#### **COMMON NAME**

needle-leaved mountain daisy

#### **SYNONYMS**

None

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Celmisia laricifolia Hook.f.

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

No

#### **ENDEMIC FAMILY**

Nο

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **NVS CODE**

**CELLAR** 

#### **CHROMOSOME NUMBER**

2n = 108

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### **DISTRIBUTION**

Endemic. South Island: Widespread from Nelson south to Southland

#### **HABITAT**

Montane to subalpine in open sparsely vegetated ground, on the margins of mires, in grassland, fellfield, and rocky places.

#### **FEATURES**

Small slender branched subshrub up to c. 150 mm tall; branches slender, diverging, clad in leaf-remnants; branchlets densely clad in imbricate, ascending, finally recurved, leaves. Lamina very narrow-linear, c.8.0-20.0 × 1.0-1•5 mm, subcoriaceous; upper surface dark, dirty-silvery-grey, with a delicate deciduous pellicle, lower clad in a very thin white to grey-white appressed tomentum; apex produced into a delicate acicular point c.2 mm long, easily broken off; margin recurved nearly or quite to midrib; base slightly narrowed to pale scarious ± pilose sheath 8.0 × 1.0-1•5 mm. Scape 5-10 mm long, very slender to almost filiform, ± clad in loose floccose deciduous hairs; bracts few, narrow-subulate, minute, sts absent. Capitula 10-20 mm diameter; involucral bracts subulate to linear-lanceolate, erect, membranous, c.7 mm long. Ray-florets several, prominent, up to c. 12 mm long, limb gradually widening to apex; disk-florets funnelform to campanulate, hardly > 5 mm long. Achenes slender, compressed-cylindric, ± 3 mm long, clad in ascending stiff hairs; pappus-hairs white, up to 4•5 mm long, very minutely barbellate



Mararoa Valley. Photographer: John Barkla



Hector Mountains. Photographer: John Barkla

#### **SIMILAR TAXA**

Similar to C. similis. Celmisia similis differs from C. laricifolia by the darker distinctly red colour of the scapes, and by the stiffer and wider leaves which are silvery and pellicled on the upper surface (those of C. laricifolia being bronzegreen and glabrous). Another distinction is that in fresh specimens the leaves of C. similis tend to be clustered towards the branchlet tips, whereas those of C. laricifolia are usually fairly evenly distributed along the branchlets

#### **FLOWERING**

September - May

#### **FLOWER COLOURS**

White, Yellow

#### **FRUITING**

October - August

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **PROPAGATION TECHNIQUE**

Easily grown from fresh seed and by the division of established plants. One of the few Celmisia that does well in cultivation. As with most Celmisia dislikes humidity and will not long tolerate drying out.

#### **ETYMOLOGY**

**celmisia**: Apparently named after Kelmis, one of Idaean Dactyls, a group of skilled mythical beings associated with the Mother Goddess Rhea in Greek mythology. Kelmis, whose name means 'casting', was a blacksmith and childhood friend of Zeus, son of Rhea and later king of the gods. In Ovid's 'Metamorphoses', Kelmis is described as offending Zeus who turned him into adamant so he was as hard as a tempered blade

laricifolia: Larch leaf

#### WHERE TO BUY

Not commercially available.

#### **ATTRIBUTION**

Description adapted from Allan (1961)

#### REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 2009 Vol. 11 No. 4 pp. 285-309

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/celmisia-laricifolia/

# Celmisia Iyallii

#### **COMMON NAME**

false Spaniard

#### **SYNONYMS**

None

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Celmisia Iyallii Hook.f.

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

#### **ENDEMIC GENUS**

#### **ENDEMIC FAMILY**

Nο

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **NVS CODE**

**CELLYA** 

#### **CHROMOSOME NUMBER**

2n = 108

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened 2004 | Not Threatened

**DISTRIBUTION** 

Endemic. South Island: widespread in drier sites so found mainly east of the main divide.

Montane to subalpine open grassland, herbfield, fellfield

#### **FEATURES**

Tufted rigid herb with short pseudo-stem arising from us. simple stock. Leaves rigid, coriaceous, narrow-ensiform tapering regularly to pungent apex; lamina 20-60 × 6-9 mm; upper surface glabrous, very finely striate to smooth; lower surface strongly grooved, densely clad in thin appressed white satiny tomentum to almost glabrous (in different plants); margins slightly recurved, entire. Sheath abruptly widened from somewhat constricted laminabase, 30-80 x 10-15 mm, thin, grooved, clad in appressed white satiny tomentum. Scape 15-36 mm long, rather slender, white with ± floccose tomentum, ± concealed by bract-sheaths. Bracts numerous, crowded; lowest leaflike, to 60 cmm long, diminishing in size toward scape apex, uppermost c.10 mm long, forming a pseudo-involucre. Capitula 25-50 mm diameter; involucral bracts linear-subulate, rigid, indurated, ± 20 mm long, midrib prominent. Ray-florets very slender, 12-14 mm long, white; limb hardly wider than tube, 4-toothed. Disk-florets 6-7 mm long, tubular, lobes triangular. Achenes 2-3 mm long, compressed-cylindric, strongly grooved; hairs minute, stiff, very minutely barbellate



Danseys pass, January. Photographer: John Smith-Dodsworth



Craigieburn Skifield, Canterbury (leaf detail). Photographer: Jesse Bythell

#### SIMILAR TAXA

The dry land equivalent of Celmisia armstrongii and C. petriei. From Celmisia petriei it is distinguished by the very rigid, narrow leaves with pungent apices, the leaf has only a single prominent midrib rather than a stout, parallel pair of veins either side of an obscure central midrib. from Celmisia armstrongii, C. lyallii differs by its very pungent (sharp tipped leaves). and by the absence of a broad yellow band either side of the midrib on the upper leaf surface.

#### **FLOWERING**

November - February

#### **FLOWER COLOURS**

White, Yellow

#### **FRUITING**

December - April

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **PROPAGATION TECHNIQUE**

Easily grown in a shaded site, planted within a permanently moist, free draining, acidic soil. Dislikes humidity and will not tolerate drying out. Best grown from fresh seed which should be sown immediately or stratified in a fridge or freezer for 1-3 months

#### **ETYMOLOGY**

**celmisia**: Apparently named after Kelmis, one of Idaean Dactyls, a group of skilled mythical beings associated with the Mother Goddess Rhea in Greek mythology. Kelmis, whose name means 'casting', was a blacksmith and childhood friend of Zeus, son of Rhea and later king of the gods. In Ovid's 'Metamorphoses', Kelmis is described as offending Zeus who turned him into adamant so he was as hard as a tempered blade

**Iyallii**: Named after David Lyall (1817-1895), 19th century Scottish naturalist and surgeon with the Royal Navy, who explored Antarctica, New Zealand, the Arctic and North America and was a lifelong friend of Sir Joseph Hooker.

#### WHERE TO BUY

Occasionally available from specialist native plant nurseries.

#### **ATTRIBUTION**

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

#### REFERENCES AND FURTHER READING

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

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/celmisia-lyallii/

# Celmisia sessiliflora

#### **COMMON NAME**

white cushion mountain daisy

#### **SYNONYMS**

Celmisia sessiliflora var. exigua G.Simpson et J.S.Thomson; Celmisia sessiliflora var. pedunculata Kirk

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Celmisia sessiliflora Hook.f.

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

No

#### **ENDEMIC FAMILY**

No

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **NVS CODE**

**CELSES** 

#### **CHROMOSOME NUMBER**

2n = 108

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### **DISTRIBUTION**

Endemic. South Island: Widespread from Nelson south to Southland

#### **HABITAT**

Montane to alpine. In grassland, herbfield and fellfield. Sometimes on rock outcrops

#### **FEATURES**

Robust densely branched subshrub forming dense patches up to c.1 m diameter and up to 100 mm tall; branchlets close-set, densely clad in imbricate leaves forming compacted rosettes. Leaves erect, becoming reflexed, sheaths persistent. Lamina 10.0-30.0 × 1•5-3.0 mm, linear to linear-subulate, coriaceous, rather rigid; both surfaces densely clad in short appressed white matted hairs; apex obtuse to sub-acute, sometimes subcucullate or apiculate; slightly narrowed at base to pale membranous sheath ± = lamina, ± clad in deciduous matted hairs. Scape reduced to minute stalk densely clad in floccose hairs, sometimes elongating to c.50 mm at fruiting stage and then hairs sparse or absent, ebracteate. Capitula 10-20 mm diameter or more, at first at least closely subtended by leaves; involucral bracts pale, slender, linear-subulate, up to 12 mm long, ± scarious, pilose (with hairs long-persistent at apex). Rayflorets c.15-17 mm long, white; linear, slightly expanded at tips; disk-florets c. 8 mm long, narrow-funnelform, flaring at 5-toothed apex. Achenes 3-4 mm long, cylindric-compressed; hairs on rather obscure ribs short, rather stiff. Pappus usually white; hairs up to 9 mm long, minutely barbellate



Mt Robert, January. Photographer: John Smith-Dodsworth



Mt Technical, Canterbury. Photographer: Jesse Bythell

#### **SIMILAR TAXA**

Can only be confused with Celmisia argentea. Celmisia argentea is confined to Otago and Southland. It is mainly distinguished by its smaller size and much shorter leaves  $(3.0-5.0 \times 0.5-1.5 \text{ mm cf. } 10.0-30.0 \times 1.5-3.0 \text{ mm})$ .

#### **FLOWERING**

October - February

#### **FLOWER COLOURS**

White, Yellow

#### **FRUITING**

November - April

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **PROPAGATION TECHNIQUE**

Difficult. Best grown from fresh seed but can be grown from cuttings. Should be planted in a free draining, moist soil. Excellent in a pot in an alpine house, or planted in a south-facing rockery. Dislikes humidity and will not tolerate drying out.

#### **ETYMOLOGY**

**celmisia**: Apparently named after Kelmis, one of Idaean Dactyls, a group of skilled mythical beings associated with the Mother Goddess Rhea in Greek mythology. Kelmis, whose name means 'casting', was a blacksmith and childhood friend of Zeus, son of Rhea and later king of the gods. In Ovid's 'Metamorphoses', Kelmis is described as offending Zeus who turned him into adamant so he was as hard as a tempered blade

sessiliflora: With unstalked flowers

#### WHERE TO BUY

Not Commercially available.

#### **ATTRIBUTION**

Description adapted from Allan (1961)

#### REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/celmisia-sessiliflora/

# Celmisia spectabilis subsp. spectabilis

#### **COMMON NAME**

Common mountain daisy, cotton plant

#### **SYNONYMS**

Celmisia spectabilis var. angustifolia W. Martin; Celmisia spectabilis var. albomarginata W. Martin; Celmisia ruahinensis Colenso

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Celmisia spectabilis Hook.f. subsp. spectabilis

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

No

#### **ENDEMIC FAMILY**

Nο

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **CHROMOSOME NUMBER**

2n = 108

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### **DISTRIBUTION**

Endemic. North and South Islands: In the North Island from the Raukumara Range; South though the central volcanoes, Kaimanawa Mountains; Kaweka Range; north-west Ruahine Range and Tararua Range. In the South Island present in north-west Nelson and from northern Marlborough south to Rakaia River and Mathias River, Canterbury.

#### **HABITAT**

Alpine and subalpine grassland and herbfield rocky sites



Island saddle, January. Photographer: John Smith-Dodsworth



Rangipo, Tongariro National Park. Photographer: Peter de Lange

#### **FEATURES**

Woody-based herb forming mats or cushions 0.2-1.0 m diameter; with branchlets arising from a usually hidden simple or multicipital stock. Living leaves in rosettes at the tips of branchlets, the whole forming a cushion or mat. Leaf sheaths densely imbricate and compacted, forming a pseudostem. Leaf lamina 30- $180 \times 3$ -30 mm, (ratio of length to width 3.7-11); coriaceous, usually lanceolate-oblong to narrowly ovate; upper surface shining and sulcate: lower surface densely covered in soft felted pale buff to brown tomentum, midrib distinct; tip acute; margins entire and recurved, occasionally minutely toothed, with the lamina base distinctly angled; sheath green to deep purple. Petiole thin with evident veins. Scape densely clad in floccose white hairs, stout, up to 300 mm long, bracteate, monocephalous. Corolla of disc florets mostly glabrous, rarely hairy. Ray florets 40-100, ligulate, white. Disc florets 60-200, 5-9 mm long, funneliform: tube glabrous or with scattered uniseriate or biseriate hairs. Achene fusiform cylindric, grooved, 1.5-6.5 mm long, usually glabrous. Pappus hairs 5-9 mm long, barbellate.

#### **SIMILAR TAXA**

Distinguished from Celmisia spectabilis subsp. lanceolata by the broader shorter leaves ( $70-240 \times 9-30 \text{ mm}$  cf.  $30-180 \times 3-30 \text{ mm}$  in subsp. spectabilis), pale buff to brown rather than almost white tomentum, and angled rather than attenuate leaf base. The sheath of subsp. lanceolata is greenish rather than green to deep purple, and the achenes usually sparsely in hairs rather than mostly glabrous (a feature of subsp. spectabilis). Celmisia spectabilis subsp. lanceolata is allopatric from subsp. spectabilis being known only from the eastern and northern Wairarapa. From subsp. magnifica, subsp. spectabilis differs by the broader and shorter leaves ( $70-290 \times 10-45 \text{ mm}$  cf.  $30-180 \times 3-30 \text{ mm}$  in subsp. spectabilis); and by the cuneate to cuneate-truncate lamina base. Celmisia spectabilis subsp. magnifica occurs to the south of the range of subsp. spectabilis from the Big Ben Range and Acheron Valley just north of Rakaia River, south to the Hunters Hills and Mount Studholme.

#### **FLOWERING**

October - February

#### **FLOWER COLOURS**

White, Yellow

#### **FRUITING**

November - May

#### **PROPAGATION TECHNIQUE**

Easily grown from fresh seed. Celmisia spectabilis is one of the few Celmisia that is easily grown in most climates though it dislikes high humidity. Best grown in a moist, free draining soil, within some afternoon shade. Because it is highly variable some selection of wild forms suited to garden growing conditions is needed.

#### **CONTROL TECHNIQUES**

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **ETYMOLOGY**

**celmisia**: Apparently named after Kelmis, one of Idaean Dactyls, a group of skilled mythical beings associated with the Mother Goddess Rhea in Greek mythology. Kelmis, whose name means 'casting', was a blacksmith and childhood friend of Zeus, son of Rhea and later king of the gods. In Ovid's 'Metamorphoses', Kelmis is described as offending Zeus who turned him into adamant so he was as hard as a tempered blade

spectabilis: Notable

#### WHERE TO BUY

Occasionaly available from specialist native plant nurseries.

#### **ATTRIBUTION**

Description based on Given (1984)

#### REFERENCES AND FURTHER READING

Given, D.R. 1984: A taxonomic revision of Celmisia subgenus Pelliculatae section Petiolatae

(Compositae—Astereae). New Zealand Journal of Botany 22: 139-158.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

## MORE INFORMATION

 $\underline{\text{https://www.nzpcn.org.nz/flora/species/celmisia-spectabilis-subsp-spectabilis/}}$ 

# Celmisia viscosa

#### **COMMON NAME**

Sticky mountain daisy

#### **SYNONYMS**

None

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Hook.f.

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

Nο

#### **ENDEMIC FAMILY**

No

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **NVS CODE**

**CELVIS** 

#### **CHROMOSOME NUMBER**

2n = 108

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### **DISTRIBUTION**

Endemic. South Island. Marlborough south an dmostly east of the divide

#### HABITAT

Upper montane to alpine. In grassland, herbfield, fellfield, around rock outcrops, and in stable talus (boulder-field) and occasionally scree



Mt Burns January. Photographer: John Smith-Dodsworth



Middle Peel. Photographer: Gillian Crowcroft

#### **FEATURES**

Stout subshrub with numerous low-growing branches, forming patches up to 2 m diameter; main stems up to 20 mm diameter, branches c.10 mm diameter, clad in persistent leaf-remnants; branchlets erect to ascending, living leaves in subrosulate tufts, ascending, finally reflexed. Lamina rigid, thick, coriaceous, very viscid, 60-150 × 6-9 mm, linear-subulate to narrow-oblong, gradually tapering from base to subacute apex; upper surface bright green, glabrous or occasionally pellicled, coarsely longitudinally grooved; lower surface white with appressed soft white felted tomentum; ribs numerous, prominent, parallel. Margins not or very slightly recurved, very minutely denticulate. Sheath abruptly widening from lamina, 20-25 × 10-15 mm, glabrous, grooved, brown to purplish. Scape stout, ± 150-300 mm long, densely glandular-pubescent; bracts few to many, viscid, linear-subulate, up to 20 mm long. Capitula 30-40 mm diameter; involucral bracts numerous, linear-subulate, acuminate, up to c.20 mm long, densely glandular-pubescent, except towards base. Ray-florets spreading, 10-20 mm long, white, limb narrow-oblong; disk-florets numerous, tubular, 3-5 mm long. Achenes narrow-cylindric, ± compressed, 3-4 mm long; ribs with short ascending hairs. Pappus-hairs up to c.6•5 mm long, white, very slender, hardly barbellate.

#### **SIMILAR TAXA**

Allied to Celmisia angustifolia from which it differs by the distinctively, heavily ribbed, extremely viscid longer leaves  $(60-150 \times 6-9 \text{ mm cf. } 25-50 \times 2-6 \text{ mm})$ .

#### **FLOWERING**

November - March

#### **FLOWER COLOURS**

White, Yellow

#### **FRUITING**

December - May

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **PROPAGATION TECHNIQUE**

Unknown. Probably best grown from fresh seed and like many Celmisia this species will probably dislike high humidity and drying out

#### **ETYMOLOGY**

**celmisia**: Apparently named after Kelmis, one of Idaean Dactyls, a group of skilled mythical beings associated with the Mother Goddess Rhea in Greek mythology. Kelmis, whose name means 'casting', was a blacksmith and childhood friend of Zeus, son of Rhea and later king of the gods. In Ovid's 'Metamorphoses', Kelmis is described as offending Zeus who turned him into adamant so he was as hard as a tempered blade

#### viscosa: Sticky

WHERE TO BUY

Not Commercially available.

#### **ATTRIBUTION**

Description adapted from Allan (1961)

#### REFERENCES AND FURTHER READING

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

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/celmisia-viscosa/

# Chaerophyllum colensoi var. colensoi

#### **COMMON NAME**

mountain myrrh, oreomyrrhis

#### **SYNONYMS**

Oreomyrrhis colensoi Hook.f. var. colensoi; Oreomyrrhis andicola var. colensoi (Hook.f.) Kirk, Oreomyrrhis colensoi var. hispida Allan, Oreomyrrhis colensoi var. multifida Allan; Chaerophyllum colensoi var. hsipidum (Allan) K.F.Chung; Chaerophyllum colensoi var. multifidum (Allan) K.F.Chung

#### **FAMILY**

Apiaceae

#### **AUTHORITY**

Chaerophyllum colensoi (Hook.f.) K.F.Chung. var. colensoi

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

No

#### **ENDEMIC FAMILY**

Nο

#### STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

#### **NVS CODE**

CHACVC

#### **CHROMOSOME NUMBER**

2n = 14

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 Not Threatened

2004 | Not Threatened

#### **ETYMOLOGY**

**chaerophyllum**: From the Greek chairo 'to please' and phyllon 'leaf' **colensoi**: Named after William Colenso (7 November 1811 - 10 February 1899) who was a Cornish Christian missionary to New Zealand, and also a printer, botanist, explorer and politician.

#### Where To Buy

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/chaerophyllum-colensoi-var-colensoi/



Mt Peel, Nelson, December. Photographer: John Smith-Dodsworth



Waiohine Gorge, Tararua Forest Park. Photographer: Jeremy Rolfe

# Donatia novae-zelandiae

#### **FAMILY**

Stylidiaceae

#### **AUTHORITY**

Donatia novae-zelandiae Hook.f.

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

No

#### **ENDEMIC FAMILY**

No

#### STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

#### **NVS CODE**

DONNOV

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### **FLOWER COLOURS**

White

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **ETYMOLOGY**

donatia: After Donati

novae-zelandiae: Of New Zealand

#### REFERENCES AND FURTHER READING

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora.

Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/donatia-novae-zelandiae/



Donatia novaezelandiae. Photographer: DoC



Seaward Moss. Photographer: John Barkla

# Dolichoglottis Iyallii

#### **COMMON NAME**

yellow snow marguerite

#### **SYNONYMS**

Senecio Iyallii Hook.f., Senecio Iyallii Hook.f. var. Iyallii

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Dolichoglottis Iyallii (Hook.f.) B.Nord.

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

Yes

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **NVS CODE**

**DOLLYA** 

#### **CHROMOSOME NUMBER**

2n = 60

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### **DISTRIBUTION**

Endemic. South and Stewart Island

#### **FLOWER COLOURS**

Yellow

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **PROPAGATION TECHNIQUE**

Difficult, should not be removed from the wild.

#### **ETYMOLOGY**

#### dolichoglottis: Long-tongue

**Iyallii**: Named after David Lyall (1817-1895), 19th century Scottish naturalist and surgeon with the Royal Navy, who explored Antarctica, New Zealand, the Arctic and North America and was a lifelong friend of Sir Joseph Hooker.

#### WHERE TO BUY

Not commercially available.

#### REFERENCES AND FURTHER READING

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



Gertrude valley, January. Photographer: John Smith-Dodsworth



Dolichoglottis Iyallii, Hawkdun Range. Photographer: John Barkla

## MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/dolichoglottis-lyallii/

# **Dolichoglottis scorzoneroides**

#### **COMMON NAME**

white snow marguerite

#### **SYNONYMS**

Senecio scorzoneroides Hook.f., Senecio Iyallii var. scorzoneroides (Hook.f.) Kirk

#### **FAMILY**

Asteraceae

#### **AUTHORITY**

Dolichoglottis scorzoneroides (Hook.f.) B.Nord.

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

Yes

#### **ENDEMIC FAMILY**

No

#### STRUCTURAL CLASS

Herbs - Dicotyledonous composites

#### **NVS CODE**

**DOLSCO** 

#### **CHROMOSOME NUMBER**

2n = 60

#### **CURRENT CONSERVATION STATUS**

2012 | Not Threatened

#### **PREVIOUS CONSERVATION STATUSES**

2009 | Not Threatened

2004 | Not Threatened

#### **DISTRIBUTION**

Endemic. South Island only

#### **FLOWER COLOURS**

White, Yellow

#### LIFE CYCLE

Pappate cypselae are dispersed by wind (Thorsen et al., 2009).

#### **PROPAGATION TECHNIQUE**

Difficult, should not be removed from the wild.

#### **ETYMOLOGY**

dolichoglottis: Long-tongue

scorzoneroides: Like a scorzonera or aster

#### WHERE TO BUY

Not commercially available.



Arthurs pass, December. Photographer: John Smith-Dodsworth



Routeburn Track, Fiordland. Photographer: John Sawyer

#### REFERENCES AND FURTHER READING

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

#### **MORE INFORMATION**

https://www.nzpcn.org.nz/flora/species/dolichoglottis-scorzoneroides/

# Dracophyllum uniflorum var. frondosum

#### **COMMON NAME**

sprawling inaka, sprawling turpentine scrub

#### **SYNONYMS**

None

#### **FAMILY**

Ericaceae

#### **AUTHORITY**

Dracophyllum uniflorum var. frondosum G.Simpson

#### **FLORA CATEGORY**

Vascular - Native

#### **ENDEMIC TAXON**

Yes

#### **ENDEMIC GENUS**

Nο

#### **ENDEMIC FAMILY**

No

#### STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

#### **NVS CODE**

**DRAUVF** 

#### **CURRENT CONSERVATION STATUS**

2012 | At Risk - Naturally Uncommon | Qualifiers: Sp

#### **PREVIOUS CONSERVATION STATUSES**

2009 | At Risk - Naturally Uncommon | Qualifiers: PD

2004 | Range Restricted

#### **BRIEF DESCRIPTION**

Low-growing grassy shrub with branches that droop down slopes and tufts of narrow wavy leaves at tips of twigs. Leaves 18-34mm long by 0.5-1.5mm wide. Flowers white, tubular, 7-10mm long, solitary at the tips of short side branches.

#### **DISTRIBUTION**

South Marlborough, central and eastern Otago.

#### **HABITAT**

Dracophyllum uniflorum var. frondosum is an land lowland to montane plant of rocky gorges and river sides and on cliff faces, especially in the schist country of eastern Otago where it can be locally abundant.



Dracophyllum uniflorum var. frondosum. Photographer: Cathy Jones



Photographer: Cathy Jones

#### **FEATURES**

Spreading to decumbent multi-stemmed shrub 0.50-1.0~m tall. Bark on old branches greyish to dark brown, finely fissured, young stems reddish brown. Leaves erect to spreading; lamina sheath,  $3.5-7.5 \times 2.0-5.0~mm$ , light green to olive green, margin membranous, shoulders rounded to auricled, ciliate or only the top half ciliate; lamina  $18.0-58.0 \times 0.5-2.0~mm$ , light green to olive green, linear, adaxial surface minutely rugose with a tuft of scabrid hairs at base, abaxial surface glabrous; margins serrulate with 60-80~mm teeth per 10~mm; apex triquetrous and keeled. Inflorescence a terminal, solitary, erect flower on lateral branches, shorter than leaves; flower bract over-topping the flower, foliose, coriaceous,  $5.5-11.0 \times 0.4-1.2~mm$  linear; adaxial surface scabrid, abaxial surface glabrous, margin serrulate. Sepals  $4.5-9.0 \times 1.5-2.0~mm$ , lanceolate, equaling corolla tube, surfaces glabrous with the top half pubescent on adaxial surface; margins serrulate. Corolla white; corolla tube  $5.5-7.0 \times 1.5-4.0~mm$ , cylindrical, widened at mouth, exterior glabrous; corolla lobes reflexed,  $1.4-1.5 \times 1.0-1.2~mm$ , ovate—triangular to triangular, shorter than corolla tube, apices inflexed, acute; apical ridge prominent, adaxial surface papillate. Stamens inserted on corolla tube in upper third, filaments 0.3-1.2~mm long; anthers included, oblong, light yellow, 1.0-1.2~mm long. Ovary  $2.5-4.5 \times 1.2-2.5~mm$ , cylindrical, apex truncate; nectary scales  $1.2-1.5 \times 0.5-0.7~mm$ , rectangular, apices subacute to retuse; style included, 2-4~mm long, glabrous; Stigma five–lobed. Fruit sessile,  $4.0-4.2 \times 2.0-3.0~mm$ , light brown, broadly obovoid, apex truncate, glabrous. Seed 0.6-0.7~mm long, brown, ovoid, testa slightly reticulate.

#### **SIMILAR TAXA**

Dracophyllum uniflorum var. frondosum is distinguished by the lax, spreading growth habit (often with arching and/or pendulous branches); by the erect–spreading leaves that are 25–50 mm long with ciliate lamina sheaths and a prominent tuft of scabrid hairs at the base on the adaxial surface of the lamina; by the solitary flowers, and flower bracts which are longer than the flowers; by the corolla tube which is equal in length to the sepals; by the densely papillate corolla lobes and by the cylindrical ovary with truncate apex. Dracophyllum uniflorum var. frondosum is most closely allied to D. rosmarinifolium (which was once known as D. uniflorum var. uniflorum) with which it sometimes grows and from which it differs in the lax habit and scrambling stems. The flower bract is also longer than the flower and narrower (0.5-1.0 mm compared to 1.0-2.0 mm in D. rosmarinifolium) with the adaxial surface scabrid. The sepal in Dracophyllum uniflorum var. frondosum equals the corolla tube and the adaxial surface texture of the sepal is pubescent in the top half and it is also longer (7-10 mm) and wider (2.0-3.0 mm compared to 1.2-2.5 mm in D. rosmarinifolium) than the corolla tube; the corolla lobes are shorter (1.4-1.5 mm compared to 2.0-2.5 mm in D. rosmarinifolium), with longer (1.0-1.2 mm compared to 0.3-0.5 mm in D. rosmarinifolium) filaments. Dracophyllum uniflorum var. frondosum also has a longer (2.5-4.5 mm) cylindrical ovary with a truncate apex and a longer (3-4 mm) style.

#### **FLOWERING**

December - February

#### **FLOWER COLOURS**

White

#### **FRUITING**

March - August

#### **PROPAGATION TECHNIQUE**

Difficult - should not be removed from the wild

#### **THREATS**

Endemic. New Zealand: South Island (Nelson lakes Area, eastern Otago).

#### **ETYMOLOGY**

dracophyllum: Dragon leaf, from its likeness to the dragon tree of the Canary Islands

uniflorum: One flowered

#### WHERE TO BUY

Not commercially available.

#### **TAXONOMIC NOTES**

Venter (2009) argues that Dracophyllum uniflorum var. frondosum should be elevated to species rank. However until such time as this happens this plant can only be known by its varietal name. Dracophyllum uniflorum s.s. Venter (2009) regards as a synonym of D. rosmarinifolium.

#### **ATTRIBUTION**

Fact sheet prepared for NZPCN by P.J. de Lange (6 June 2012). Description adapted from Venter (2009).

#### REFERENCES AND FURTHER READING

Venter, S. 2009: A taxonomic revision of the genus Dracophyllum Labill. (Ericaceae). Unpublished Phd Thesis, Victoria University of Wellington, Wellington.

#### **CITATION**

Please cite as: de Lange, P.J. (Year at time of access): Dracophyllum uniflorum var. frondosum Fact Sheet (content continuously updated). New Zealand Plant Conservation Network.

https://www.nzpcn.org.nz/flora/species/dracophyllum-uniflorum-var-frondosum/ (Date website was queried)

#### MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/dracophyllum-uniflorum-var-frondosum/