## Guide to Celmisia parts and terms

#### GENERAL PLANT FEATURES

Habitat - where the plant lives, e.g., grassland, rocky places, wetlands.

- Coastal living on the coast, near the sea.
- Lowland living away from the coast, but below 600 m above sea level.
- Montane includes all habitats 600–900 m above sea level.
- Subalpine above the treeline but below the bushline, usually 900-1300 m above sea level.
- Alpine living above the bushline, usually 1300 m above sea level.

#### Growth form

- Habit the overall growth form of the plant.
- Tufted herb with the growth form of a tussock clump, appearing to arise from a single point at ground level.
- Terminal rosette where the living-leaves are clustered near the stem tip to form a rosette; the leaves appear to radiate out from a centre.
- Cushion the stems are closely packed together to form a raised mound off the ground surface.
- Mat the stems are closely packed together, but not raised to form a mound off the ground surface.
- Leaves growing down the stem where the living leaves are spaced down the stem rather than being clustered near the stem tip.
- Shrub a plant with woody stems, not reaching a great size and without an obvious trunk.

**Stickiness** – whether any part of the plant is sticky to the touch; sometimes this can be observed without touching from the presence of glandular hairs or resinous glands.

#### LEAF FEATURES

Midvein – the central vein down the middle of the leaf; can be visible as an indent, coloured line or raised line; in some Celmisia it is not seen or only present on the lower leaf surface.

Leaf size – given in this guide in millimetres (mm)



Tufted herb, C. gracilenta



Mat, C. sessiliflora



Leaves growing down the stem, Shrub, C. ramulosa var. C. ramulosa var. tuberculata



tuberculata



Midvein, upper surface, C. densiflora



Midvein, lower surface, C. densiflora

using the following format to indicate the range of sizes commonly observed for each Celmisia, where the brackets give the smallest and largest extremes of the leaf size and the unbracketed numbers indicate 80% of the leaf range, e.g. (20-) 30-40 (-50) mm = (minimum-) low range-high range (-maximum).

Leaf length - measured excluding the leaf stalk from where the leaf surface begins up the centre line of the leaf to the tip.

Leaf width - measured across the widest part of the leaf.

#### Leaf shape

- Parallel edges a leaf that is straight for most of
- Lance-shaped a leaf that is a narrow triangle in shape, starting wide near the base and gradually narrowing to the tip.
- Widest towards base an egg-shaped leaf, where the leaf stalk is closer to the widest part of the leaf.
- Widest towards tip an upside-down egg, where the leaf stalk is closer to the narrower part of the leaf; also described as spatula shaped.
- Widest in middle where the widest part of the leaf is halfway between the leaf stalk and the tip.
- Heart-shaped where the leaf has lobes near the base (like the top of a heart), the leaf stalk arises from a notch between the lobes, with the rest of the leaf narrowing to a point.

#### Leaf surface

- Surface the main plane(s) of the leaf, the fleshy part of the leaf.
- Upper surface the side of the leaf facing the main stem or inside of the plant.
- Lower surface the side of the leaf facing away from the main stem, towards the outside of the
- Longitudinal ridges and grooves a series of undulations down the length of the upper leaf surface, like corrugated iron.



Leaf measurements, C. verbascifolia subsp. verbascifolia



Leaf with parallel edges, C. major var. brevis



Lance-shaped leaves, C. armstrongii



Leaf widest towards tip. C. bonplandii



Leaf widest in middle. C. traversii



Leaf widest towards base, C. parva



Leaf heart shaped, C. cordatifolia var. similis



grooves, C. incana



Longitudinal ridges and grooves, C. traversii

#### **GROUP 1**

- Cushions or mats of small rosettes
- Narrow upright leaves less than 30 mm long
- Leaves white-green, silver to grey; may have a skin
- Flowers may lack stalk



C. argentea (pp. 24, 56)



C. clavata (pp. 24, 66)



C. laricifolia (pp. 24, 112)



C. sessiliflora (pp. 25, 152)



C. similis (pp. 25, 154)

#### **GROUP 2**

- Cushions or mats of small rosettes
- Narrow leaves less than 30 mm long
- Leaves green, brown or mottled; may have a skin
- Flowerheads have stalks



C. alpina (pp. 25, 52)

#### GROUP 3

- · Small tufts or clumps
- Narrow upright or drooping leaves up to 250 mm long
- Upper leaf surface green, grey-green to silvery, or mottled; has thin skin



C. gracilenta (pp. 26, 90)



C. graminifolia (pp. 26, 92)



C. insignis (pp. 26, 110)



C. major (var. major and var. brevis), (pp. 27, 124)



C. markii (pp. 27, 126)



C. polyvena (pp. 27, 138)



C. spedenii (pp. 28, 162)



C. vespertina (pp. 28, 172)

### GROUP 4

- Single or several spiky tufts/rosettes
- Narrow or lance-shaped leaves 200–500 mm long, stiff, upright
- Upper leaf surface uniformly green or with a yellow-orange stripe; hairless or may have a skin



C. armstrongii (pp. 28, 58)



C. coriacea (pp. 29, 72)



C. lyallii (pp. 29, 118)



C. petriei (pp. 29, 134)

#### GROUP 5

- Single rosettes or large clumps
- Stiff, lance-shaped leaves usually more than 100 mm long
- Upper leaf surface leadgrey, silvery, white or golden; skin present



C. monroi (pp. 30, 128)



C. semicordata subsp. semicordata (pp. 30, 148)



C. semicordata subsp. aurigans (pp. 30, 150)



C. semicordata subsp. stricta (pp. 31, 151)

#### **GROUP 6**

- Rosettes can form large patches
- Parallel-sided leaves up to 120 mm long, appear spirally arranged
- Plants sticky
- Upper surface hairless,
   5-6 parallel longitudinal grooves



C. viscosa (pp. 31, 174)

### GROUP 7

- Single rosettes up to large mats
- Thick upright leaves up to 240 mm long
- Upper leaf surface mid-green with shallow grooves
- Lower surface has thick felted hairs



C. adamsii (pp. 31, 48)



C. spectabilis subsp. spectabilis (pp. 32, 158)



C. spectabilis subsp. lanceolata (pp. 32, 160)



C. spectabilis subsp. magnifica (pp. 32, 161)



C. monroi (p. 128)

- Leaves 120–550 mm long and 10-32 mm wide.
- Large upright plants; stiff, silvery-green leaves.
- Upper leaf surface has longitudinal ridges and grooves; silvery skin.
- Lower leaf surface has dense white hairs; raised midvein.
- Leaf margins without teeth.
- Often in dry, rocky places.



*C. semicordata* subsp. semicordata (p. 148)

- Leaves 110–420 mm long and 22-70 mm wide.
- Large single rosettes or large clumps.
- Upper leaf surface lead grey or Upper leaf surface golden; skin pale, grey-green; skin present.
- Small teeth present on leaf margins.
- Flower stalks tall with large flowerheads.



C. semicordata subsp. aurigans (p. 150)

- Leaves 110-420 mm long and 20-70 mm wide.
- Large single rosettes or large clumps.
- present.
- Small teeth present on leaf margins.
- Flower stalks tall with large flowerheads.



C. semicordata subsp. stricta (p. 151)

- Leaves 110-329 mm long and 20-40 mm wide.
- Single rosettes, or more often forming large mats; leaves lance-shaped.
- Upper leaf surface silverywhite; skin present.
- Flower stalks tall with large flowerheads.



C. viscosa (p. 174)

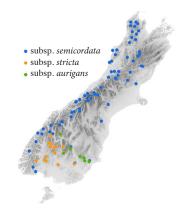
- Leaves 60-120 mm long and 6-9 mm wide.
- Leaves appear to be spirally arranged within a rosette; plants can form large mats.
- Upper leaf surface with 5–6 parallel grooves down the leaf length.
- · Lower leaf surface with dense white hairs, sometimes in lines • down the leaf.
- Plants are sticky, especially the newest leaves, flower stalks, and flower buds.

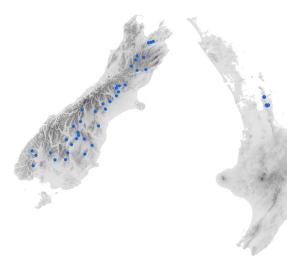


*C. adamsii* (p. 48)

- Leaves 100-280 mm long and 8-28 mm wide.
- Single rosettes or small clumps; leaves with parallel margins.
- Upper leaf surface evenly green; skin present.
- · Lower leaf surface with white hairs: midvein visible.
- Plants of rocky places and exposed sites in forests.







**GROUP 11 GROUP 11** 



C. allanii (p. 50)

- Leaves 20-58 mm long and 12-17 mm wide.
- Small or large mats; leaves clustered at stem tips, elongated spatula shape.
- Upper leaf surface with loose, woolly hairs.
- Lower leaf surface with dense, soft hairs.
- Flower stalk red purple (rarely green); covered in thick hairs.



C. discolor (p. 78)

- Leaves 23-40 mm long and 6-12 mm wide.
- Blue-green patches; leaves spatula shaped.
- Upper leaf surface has shallow longitudinal ridges and grooves; hairs present or absent.
- · Lower leaf surface has white hairs; midvein often indistinct. • Leaf margins with tiny teeth.
- Flower stalks and bracts are noticeably sticky, leaves sticky but less so.



C. haastii var. tomentosa (p. 94)

- · Leaves 25-80 mm long and 10-28 mm wide.
- · Large patches; leaves clustered at stem tips, spatula shaped.
- Upper surface covered in white or grey hairs.
- Lower leaf surface covered in white hairs; midvein visible.
- Rock and Pillar Range (and possibly Pisa Range).



C. hectorii (p. 96)

- Leaves 15-20 mm long and 5-7 mm wide.
- Plants forming sprawling mats; Often large patches; leaves leaves clustered at stem tips.
- Plants silvery white as both leaf surfaces covered in hairs.
- Leaf tip has prominent point.
- Older leaves remain clad to woody stems.



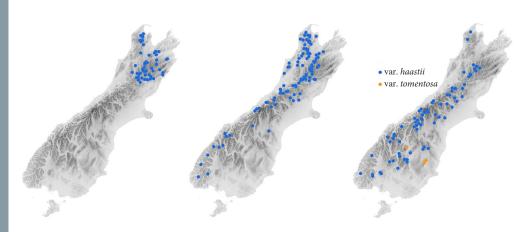
C. incana (p. 108)

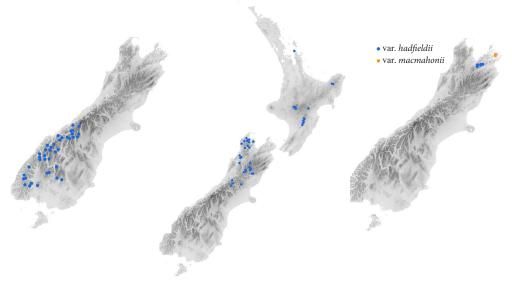
- Leaves 35–58 mm long and 10-19 mm wide.
- clustered at stem tips, spatula shaped.
- Upper leaf surface with thick, matted hairs; white or off white to blue-green or grey.
- Upper leaf surface with longitudinal ridges and grooves visible despite hairs.
- Leaf margins and tip toothed.
- New leaves and bracts are sticky.



C. macmahonii (var. macmahonii and var. hadfieldii) p. 122)

- Leaves 20–25 mm long and 4-8.5 mm wide.
- Mat forming plants on bluffs and rock crevices.
- Both leaf surfaces covered in silky hairs; usually silvery, sometimes light brown.
- Leaf margin teeth obscured by hairs.





### Celmisia allanii W.Martin

A distinctly hairy plant of the northern South Island. Both leaf surfaces are typically covered in loose or felted, woolly, white hairs; easy to identify when the hair cover is thick but challenging when the woolly hairs are less dense.

Habit: terminal rosette of living leaves, with multiple rosettes forming loose cushions or mats; dead leaves remain clad to the stems below the live leaves.

Leaf size: (28-) 20-58 (-80) mm long and (9-) 12-17 (-30) mm wide.

Leaf shape: usually widest towards the leaf tip but sometimes widest near the middle or base.

Leaf tip: rounded, with a tooth like the marginal teeth that may be obscured by hair.

Upper leaf surface: white to pale blue-green depending on the amount of hairs present; usually covered with a thick felt of loose woolly hairs, but sometimes a thin fluff instead; weak, longitudinal ridges and grooves are present, often hidden by hairs; older leaves can lose their hairs.

hairs; midvein often obscured but can appear as a raised line, indent or darker line in the felt.

Leaf margins: toothed [5] (but often hidden by hairs); can be undulating.

Leaf stalk: up to 20 mm long.

Stickiness: leaves sticky, but this is disguised by the be a single variable species (see p. 181). thick leaf hairs; flower stalk and flowerhead bracts sticky to the touch.

Flower stalk: up to 250 mm; often covered in woolly hairs, but the purple (rarely green) colour of the underlying stem is still visible; bracts leaflike, widely spaced and becoming smaller up the stalk.



Flowerhead: 30-35 mm diameter; flowerhead bracts sticky, with fine white hairs either sparse Lower leaf surface: covered in a dense white felt of on the margins or densely covering the entire flowerhead bract [9].

**Seedhead**: seeds with long hairs.

Habitat: alpine; rocky outcrops, fellfield, snowtussock grasslands, and herbfields.

Notes: C. allanii, C. durietzii, and C. sinclairii could

Looks like: cudweed (Pseudognaphalium luteoalbum and P. lanatum) but is distinguished from these by the 'typical' Celmisia flowerheads, as opposed to the small yellow flowerhead found in Pseudognaphalium), much larger size (leaves 20–30 mm long and 2–5 mm wide in Pseudognaphalium), and thicker woollier hairs on the leaves.



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### Celmisia bellidioides Hook.f.

Hairless, succulent-looking leaves with notched edges. A lover of wet rocky places in the South Island. Shares a passing resemblance to the common lawn daisy (*Bellis perennis*), from which it gets its name.

Habit: a creeping branching plant forming loose mats with living leaves forming an indistinct rosette; older leaves remain clad to the stems.

**Leaf size:** (7–) 8–12 (–18) mm long and 2–6 mm wide.

Leaf shape: egg-shaped or oblong.

Leaf tip: rounded; a small black tooth may be present, appearing as a black dot to the naked eye.

**Upper leaf surface:** hairless, often shiny in appearance; midvein appears as a slight indentation or ridge.

Lower leaf surface: hairless and paler in colour than upper leaf surface; midvein appears as a slight indentation; occasionally leaves have purple pigmentation near the base.

Leaf margins: one to two pairs of teeth; margins and teeth can have slight reddish brown coloration; teeth appear as slight notches in the leaf margin [1].

Leaf stalk: absent; leaf gradually tapers into the sheath; loose woolly white hairs present on the sheath.

Stickiness: no parts sticky.

Flower stalk: up to 50 mm long; often with a reddish brown tint; bracts either entirely red or with darkened tips [7].

Flowerhead: around 20 mm diameter; flowerhead bracts are hairless with purple-red edges; unopened flower buds can have a nodding appearance.

Seedhead: seeds very hairy [10], except near tip. Habitat: montane to alpine; rocky and gravelly places near waterways, including seeps; also on limestone screes; occasionally found in forest clearings and on moraines.

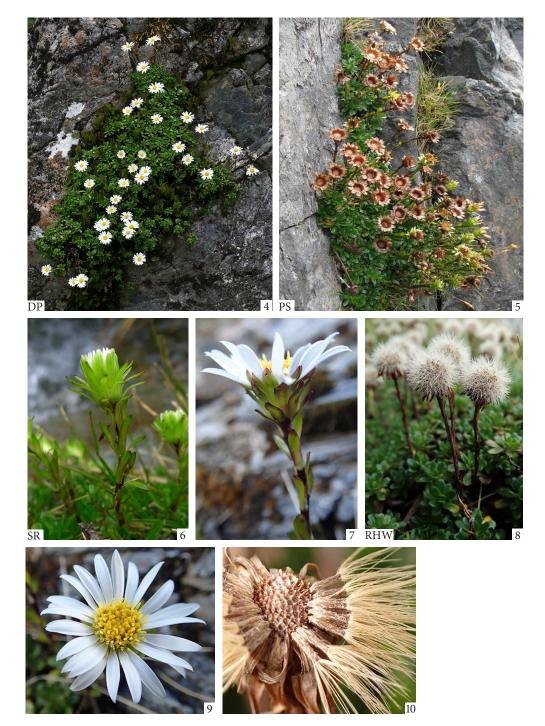
Looks like: *C. thomsonii*, and both can be found in *bellidioides*).





the Eyre Mountains of Southland, where *C. thomsonii* is endemic. *C. thomsonii* is identified by the presence of stalked glandular hairs on its leaves.

C. bellidioides is often overlooked as a Celmisia when not in flower. Could be confused with Abrotanella or Lagenophora when viewing the leaves alone. However, the combination of hairless leaves with slightly notched margins should distinguish C. bellidioides from other genera. When in bud the flowerheads have a similarity to Anaphalioides bellidioides at the same flowering stage, but C. bellidioides is identified by the hairless leaves and almost succulent appearance (compared with white, hairy, thin, almost papery leaves in A. bellidioides).



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# Celmisia cordatifolia Buchanan

Leaves are arrow or heart shaped with distinctively lobed bases (cordate, giving the plant its name); the lower leaf surface and margins are densely covered in hairs. Restricted to the Richmond Range and Mt Bounds.

Habit: terminal rosette of living leaves.

**Leaf size:** (40–) 60–80 (–150) mm long and (20–) 35–45 (–50) mm wide.

Leaf shape: arrow or heart shaped with lobed bases. Leaf tip: bluntly rounded or slightly pointed.

Upper leaf surface: has parallel creases down the length; hairs absent except in young leaves, where brown hairs can be sparse across the upper surface; midvein visible, especially in the lower third, and often purple.

Lower leaf surface: densely covered in red-brown or pale-brown velvety hairs; midvein not clearly visible except where the leaf stalk joins the leaf.

Leaf margins: curved towards the underside of leaves; teeth present but hidden by red-brown hairs; margins can have a wavy appearance.

Leaf stalk: up to 120 mm long; dark purple [1, 9]; can have long loose red-brown hairs.

Stickiness: no parts sticky.

Flower stalk: up to 300 mm long; red-purple clad in red-brown hairs [7]; bracts straight, widely spaced, with loose red-brown hairs.

Flowerhead: 40–50 mm diameter; flowerhead bracts covered in red-brown hairs [8].

Seedhead: seeds without hairs.

Habitat: alpine; rocky herbfields, favouring damp, south-facing sites, growing in shallow peaty soils.

Varieties: There are three named varieties of *C. cordatifolia*. David Given described two of the varieties (var. *cordatifolia* and var. *similis*), with the third (var. *brockettii*) included in var. *cordatifolia*.

C. cordatifolia var. cordatifolia [1–8] is the most widespread of the three and is identified by the thicker leaves with red-brown hairs on the lower surface.

C. cordatifolia var. similis [9–12] is known only from Mt Richmond and has thinner and more



pointed leaves than var. *cordatifolia*. It also has prominently curved leaf margins and flat, shining, pale-brown or creamy white hairs on the lower leaf surface (compared with the red-brown hairs of var. *cordatifolia*).

*C. cordatifolia* var. *brockettii* was not accepted by David Given in his revision of the group but is notable in having dark chocolate-brown hairs on the lower leaf surface. It is known only from Mt Bounds in Marlborough.

Looks like: *C. traversii* as both species have brown hairs on the lower leaf surface and margins. *C. traversii* differs in being larger (leaves rarely less than 100 mm, whereas they are rarely longer than 80 mm in *C. cordatifolia*). *C. cordatifolia* has lobed bases to the leaf (giving the heart-shaped appearance), whereas in *C. traversii* the leaf tapers to the stalk (or occasionally is blunt).

*C. verbascifolia* var. *membranacea* has lobed leaf bases and is a similar-sized plant. It has thinner leaves that appear to have no hairs on the lower leaf surface. The two species are not known to grow together.



1–8: *C. cordatifolia* var. *cordatifolia*, Mt Richmond. 9–12: *C. cordatifolia* var. *similis*, Mt Richmond.

### Celmisia dubia Cheesem.

A species of the Western Nelson sandstone erosion pavements, particularly of the Denniston and Stockton plateaus. The dull lead-grey skin on the upper surface, distinct leaf stalk and the (often-present) purple coloration in the leaf stalk and lower midvein are helpful features to distinguish it from other *Celmisia* species.

**Habit:** terminal rosettes of living leaves; single rosettes or patches of several rosettes.

**Leaf size:** (15–) 23–150 (–200) mm long and (5–) 8–25 (–40) mm wide.

Leaf shape: elliptical, with the widest point towards the middle.

Leaf tip: pointed, sometimes with a short tooth.

**Upper leaf surface:** shallowly grooved; covered in a dull lead-grey skin [6].

**Lower leaf surface:** dense satiny white hairs; midrib visible and often purple.

Leaf margins: teeth present; margins rolled slightly towards the lower leaf surface.

**Leaf stalk:** up to 50 mm long; leaf sheath can have purple pigmentation.

Stickiness: no parts sticky.

Flower stalk: 100–250 mm long, covered in loose woolly hairs; purple beneath the hairs; the lowermost bracts are leaf-like, becoming small and narrow up the stalk.

Flowerhead: 20–30 (–50) mm diameter; outermost flowerhead bracts have loose woolly hairs [10].

Seedhead: seeds usually without hairs.

Habitat: montane to alpine; usually in thin infertile soils (including pākihi) and rock crevices (typical of the southern extent of the range); also in grasslands (more frequently in the northern extent of the species' range).

Notes: David Given included a much larger form of *C. dubia* in his treatment. These larger forms are







frequent throughout Western Nelson outside the coal measure ecosystems, becoming the dominant form of *C. dubia* further north. However, in the absence of further research, this guide is treating *C. dubia* as a smaller-leaved species only of the coal measure ecosystems. The larger-leaved forms have been placed in *C. semicordata* subsp. *semicordata*. Although placing them here is an uneasy fit, and they are likely something different altogether, further work needs to be done to work out where these larger-leaved forms belong.

Looks like: *C. parva*, especially smaller plants from the Westport area. However, *C. parva* has indented secondary veins (perpendicular to the midvein) on the upper leaf surface, giving the leaves a bubbled appearance. *C. dubia* also has a thick dull-grey skin [6] that is not found in *C. parva*.



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## Celmisia semicordata subsp. semicordata Petrie

The largest species of *Celmisia*, with plants up to 0.5 m tall forming dense clumps or occurring singly. This South Island species occurs in a wide range of habitats and is most common in high-rainfall areas. Leaves are silvery green, always with a skin on the upper surface, while the lower surface is densely covered with white satiny hairs, except for the midvein.

Habit: large terminal rosettes of living leaves; single rosettes, several rosettes or clumps; leaves erect when young but spread horizontally with age.

Leaf size: (105–) 110–420 mm long and (20–) 22–70 (–75) mm wide.

Leaf shape: lance-shaped or narrowly widest in the middle, tapering to a short leaf stalk.

Leaf tip: pointed.

Upper leaf surface: shallow longitudinally grooved; skin present, usually silvery, but plants can appear to be green; skin peeling or becoming dull grey with age.

Lower leaf surface: densely covered in white satiny hairs; midvein visible.

**Leaf margins:** minutely toothed; flat, slightly or strongly rolled towards the lower leaf surface.

Leaf stalk: short.

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Stickiness: no parts sticky.

Flower stalk: up to 600 mm long, covered in loose, white, woolly hairs; bracts, mostly in the upper half, can be up to 150 mm long.

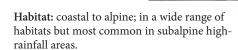
Flowerhead: (40–) 60–80 (–110) mm in diameter; flowerhead bracts covered in soft felted or loose woolly hairs.

Seedhead: seeds without hairs or sparsely hairy.

Notes: Plants from the Paparoa Range and Fiordland have shorter, wider leaves than elsewhere. The coastal population at Charleston shows this variation too, probably because of the salt spray they are exposed to. There are plants of subsp. *semicordata* on Taranaki Maunga. It is likely that these were planted in the early days of the National Park as the species is not known to occur in the North Island outside of these few plants.







Looks like: *C. monroi*, which has a more eastern distribution. However, *C. semicordata* subsp. *semicordata* and *C. monroi* overlap around Hanmer and the eastern edge of Nelson Lakes National Park. *C. monroi* tends to have a more upright growth form

than *C. semicordata* subsp. *semicordata*, which is generally the larger of the two.

David Given's treatment of *C. dubia* included a larger form from northern parts of Western Nelson. However, this guide treats *C. dubia* as a smaller plant of the coal measure ecosystems. In the absence of further research, Given's larger forms have been included in *C. semicordata* subsp. *semicordata*.

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the North Island outside of these few plants.

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C. monroi tends to have a more upright growth form included in C. semicordata subsp. semicordata.

## Celmisia semicordata subsp. aurigans Given

A golden-skinned subspecies of *C. semicordata* found in Otago and Southland.

**Habit:** large terminal rosettes of living leaves; single rosettes or multiple clumped rosettes; leaves held erect when young but spread horizontally with age.

Leaf size: 110-420 mm long and 20-70 mm wide.

**Leaf shape:** lance-shaped or narrowly widest in the middle, tapering to a short leaf stalk.

Leaf tip: pointed.

Upper leaf surface: shallow longitudinally grooved; skin present, golden [2], peeling or becoming dull grey with age.

Lower leaf surface: densely covered in white satiny hairs; midvein visible.

Leaf margins: minutely toothed; rolled towards the lower leaf surface.

Leaf stalk: short.

Stickiness: no parts sticky.

Flower stalk: up to 600 mm long, covered in loose, white, woolly hairs; bracts noticeably long and mostly found in the upper half, and can be up to 150 mm long.

Flowerhead: (40–) 60–80 (–110) mm diameter; flowerhead bracts covered in soft felted or loose woolly hairs.

Seedhead: seeds without hairs.

**Habitat:** montane to alpine; in tussock grasslands, herbfields and rocky places.

Looks like: the other subspp. of *C. semicordata* but differs by the presence of a golden-coloured skin. Hybrids between *C. verbascifolia* and *C. semicordata* can also resemble *C. semicordata* subsp. *aurigans*, but these hybrids are always extremely hairy on the upper leaf surface (rather than having a skin) [3].







## Celmisia semicordata subsp. stricta (Cockayne) Given

A magnificent silvery-leaved subspecies of *C. semicordata* from Otago and Southland. Leaves are distinctively lance-shaped and rigid.

**Habit:** large terminal rosettes of living leaves; can form large spreading carpets; leaves held erect.

**Leaf size:** 110–320 mm long and (7–) 20–40 mm wide.

Leaf shape: lance-shaped [1–2] or narrowly widest in the middle, tapering to a short leaf stalk.

Leaf tip: pointed [1].

**Upper leaf surface:** a silvery skin present, becoming grey with age.

Lower leaf surface: densely covered in white satiny hairs; midvein visible.

Leaf margins: minutely toothed; rolled towards the lower leaf surface.

Leaf stalk: short.

Stickiness: no parts sticky.

Flower stalk: up to 600 mm long, covered in loose, white, woolly hairs; bracts numerous in the upper half and can be up to 150 mm long.

Flowerhead: (40–) 60–80 (–110) mm in diameter; flowerhead bracts covered in soft felted or loose woolly hairs [3].

**Seedhead:** sparse hairs on seeds.

**Habitat:** montane to alpine; grasslands and sometimes rocky places.

Looks like: Hybrids between *C. semicordata* subsp. *semicordata* and *C. coriacea* can look like *C. semicordata* subsp. *stricta*, but these are found outside of the distribution for subsp. *stricta*.







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