

Pachycladon stellatum

COMMON NAMES

Starry cress

BIOSTATUS

Native – Endemic taxon

CURRENT CONSERVATION STATUS

2023 | Threatened – Nationally Vulnerable | Qualifiers: Sp, CD, DPS, DPT

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CATEGORY

Vascular

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

FLOWER COLOURS

Green, White

DETAILED DESCRIPTION

Polycarpic perennial rosette-forming herb, up to 340 mm tall; rootstock stout, up to 16 mm diameter. Rosette, densely leafy, foliage coriaceous, dull, grey-green, often red-purple on petiole and lower surface. Leaves 20–80 × 5–19 mm, narrow-lanceolate, lanceolate, or oblanceolate, shallowly serrate with 4–8 pairs of teeth; apex acute to subacute; base attenuate. Hairs on leaves and inflorescence bifurcating, dendritic, sometimes simple, white or sordid, harsh or scabrid. Inflorescence 150–350 mm, compound, with terminal and lateral racemes, lateral racemes alternate and occasionally with secondary racemes. Cauline leaves subtending lateral racemes and rarely lowermost flowers, 3.5–55 × 1–5 mm, similar to rosette leaves, becoming smaller and linear up stem, moderately to densely hairy; base cuneate to subauriculate. Racemes 60–200 mm long at fruiting, 10–40-flowered; sparsely to densely covered in hairs. Pedicels 4.0–5.5 mm long at flowering, 7–15 mm long at fruiting, usually glabrous, suberect to erecto-patent. Sepals 3.5–4.5 × 1.3–2.1 mm, ascending, green, oblong, with few hairs, often flushed pink in bud; margin broad, membranous, white; apex obtuse to subacute. Petals 6–7 × 3–4 mm, white; claw 2.0–3.5 mm long; limb broad elliptic to obovate, or short oblanceolate, 3.0–3.5 mm long; apex rounded; base attenuate to cuneate. Stamen filaments 2.5–4.9 mm long; anthers 0.9–1.1 × 0.5–0.6 mm, white. Nectary almost surrounding the bases of the lateral stamens. Ovary 2.6–4.1 × 0.5–0.8 mm, green, glabrous. Style 0.3–0.7 mm long. Stigma 0.4–0.5 mm wide. Siliques 30–60 × 1.3–2.3 mm, linear, valves weakly keeled at base, 1-veined, at maturity yellow-brown and often flushed red-brown. Septum intact, with or without a midvein. Funicle 0.3–0.5 mm long. Seeds 30–50 per locule, 1.1–1.4 × 0.5–0.7 × 0.3–0.4 mm, oblong to narrowly ellipsoid, flattened, brown or red-brown; surface regular to irregular, reticulate; wing usually apical but sometimes decurrent on apical half of seed, 0.2–1.0 mm long at seed apex.

SIMILAR TAXA

Pachycladon stellatum could be confused with *P. enysii* and *P. fastigiata*. *Pachycladon stellatum* has grey-green leaves with shallow regular lobes, dense star-shaped hairs and long flowering stems. *P. fastigiata* has sharply-toothed leaves. *P. enysii* has short flower stems. In general, readily distinguished from other rosette-forming *Pachycladon* by the narrow lanceolate to oblanceolate, serrate, grey-green leaves which are densely covered in small bifurcating and dendritic hairs.



Tone River, Marlborough. Photographer: Rowan Hindmarsh-Walls, Date taken: 15/12/2022, Licence: CC BY-NC.



Tone River, Marlborough. Photographer: Rowan Hindmarsh-Walls, Date taken: 15/12/2022, Licence: CC BY-NC.

DISTRIBUTION

Endemic to the upper reaches of several river systems of inland South Marlborough and the Kaikoura Ranges and Upper Awatere.

HABITAT

Upland to subalpine rocks, on ledges, crevices, cracks and overhanging bluffs. Often found on shaded, south-facing sites.

THREATS

A rather localised species, which is unusual for the genus in that it extends from montane to lowland cliff and rock outcrop habitats. In these sites plants are vulnerable from weed competition, browsing animals such as goats, and plant collectors. At least one population has gone extinct through the actions of plant collectors. Most of the known sites are small and mature reproductive individuals are scarce. Indications are that many of the known populations are declining rapidly, though the exact cause(s) is/are unknown.

GENUS

Pachycladon

FAMILY

Brassicaceae

AUTHORITY

Pachycladon stellatum (Allan) Heenan et A. Mitch.

SYNONYMS

Cheesemanian fastigiata var. stellata Allan, Cheesemanian stellata (Allan) Heenan et Garn.-Jones; Pachycladon stellata (Allan) Heenan et A. Mitch. orth. var.

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

FLOWERING

November to January

FRUITING

January to April

PROPAGATION TECHNIQUE

Difficult. Should not be removed from the wild.

CULTIVATION

Not generally available commercially but plants are held by specialist growers.

ETYMOLOGY

stellatum: With spreading, star-like rays

NVS CODE

PACSTE

CHROMOSOME NUMBER

2n = 20

PREVIOUS CONSERVATION STATUSES

2017 | Threatened – Nationally Critical | Qualifiers: DP

2012 | Threatened – Nationally Critical | Qualifiers: DP

2009 | Threatened – Nationally Critical | Qualifiers: DP

2004 | Serious Decline

[Jump to current conservation status](#)

REFERENCES AND FURTHER READING

Heenan, P.B; Garnock-Jones, P.J. 1999: A new species combination in *Cheesemanian* (Brassicaceae) from New Zealand. New Zealand Journal of Botany 37: 235–241

ATTRIBUTION

Description based on Heenan et al. (1999).

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/pachycladon-stellatum/>

PDF DATE

08 July 2026