

Carmichaelia monroi

COMMON NAME

stout dwarf broom

SYNONYMS

Carmichaelia monroi var. *longecarinata* G.Simpson

FAMILY

Fabaceae

AUTHORITY

Carmichaelia monroi Hook.f.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

CRMMON

CHROMOSOME NUMBER

2n = 32

CURRENT CONSERVATION STATUS

2017 | At Risk – Declining | Qualifiers: DP

PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

BRIEF DESCRIPTION

Rare, very low-growing leafless shrub consisting of erect flattened yellow-green branches with a blunt orange or red tip. Branches 3–5mm wide, grooved, blunt-tipped. Flowers pea-like, pink with dark purple centre, base hairy, in clusters. Fruit a dry pod with hard seeds and which do not split open.

DISTRIBUTION

Endemic. New Zealand: South Island (Marlborough and Canterbury).

HABITAT

Inhabiting stable slopes, terraces, eyots within braided river; also amongst loose rock, scree debris, and eroding soils at the interface between rock outcrops and unstable scree and the adjacent tussock and shrub vegetation.



MacKenzie pass. November. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



Rachael Range. Photographer: Gillian M. Crowcroft, Licence: All rights reserved.

DETAILED DESCRIPTION

Dwarf, spreading shrub, up to 0.15–0.25 × 0.40–1.00 m. **Branches** stout, ascending and horizontal, 10–35 mm diameter. **Cladodes** linear, striate, compressed, erect to spreading, green to green-bronze, often hairy when young, glabrous at maturity, 22–75 × 2–6 mm; apex obtuse, yellow, green, bronze, or red; leaf nodes 2–4. **Leaves** simple, oblanceolate, fleshy, green to green-bronze, present on seedlings and occasionally mature plants, 5.0–8.0 × 2.0–4.5 mm; both surfaces with scattered hairs; apex emarginate to retuse; base cuneate; petiole glabrous or sparsely hairy, 1.5–2 mm long. Leaves on cladodes reduced to a scale, broadly triangular, glabrous, 0.5–0.6 × 0.9–1.1 mm; apex obtuse. **Stipules** free, broad-triangular, 0.25–0.40 × 0.75–0.90 mm; upper surface glabrous; lower surface hairy, becoming glabrous with age; apex subacute; margin hairy. **Inflorescence** a raceme 1–2 per node, each with 1–3 flowers. **Peduncle** hairy, green, 6–8 mm long. **Bracts** triangular, glabrous, pale green to tan, < 0.5 mm long; apex acute; margin hairy. **Pedicel** hairy, pale green, 3–4 mm long. **Bracteoles at base of calyx** sometimes absent, glabrous, < 0.4 mm long; apex subacute; margin hairy. **Calyx** campanulate, 2.5–3.0 × c. 2.0 mm; inner surface glabrous, green; outer surface hairy, green. **Calyx lobes** triangular, green and often flushed red, < 1 mm long; outer surface densely hairy; apex acute, often black; margin hairy. **Standard** obovate, patent when young, reflexed at maturity, positioned at proximal area of keel, keeled, 6–7 × 5–6 mm; distal and central areas of upper surface purple, proximal area pale green, margins white, sometimes purple-veined; distal and central area of lower surface white, proximal area pale green, sometimes purple-veined; apex retuse; margins recurved; claw pale green, c. 3 mm long. **Wings** oblong, shorter than keel, 7–8 × c. 2 mm; distal and central areas of adaxial surface purple, proximal area green; distal and central areas of abaxial surface white, proximal area pale green; auricle triangular, pale green, apex subacute, c. 1 mm long; claw pale green, c. 2 mm long. **Keel** 8.5–10.0 × 3.0–4.0 mm; distal and central areas of upper surface purple, proximal area pale green; auricle triangular, pale green, with subacute apex, c. 1.5 mm long; claw pale green, 3.0–3.5 mm long. **Stamens** 8.5–10.0 mm long; lower filaments connate for c. $\frac{1}{3}$ length and outside filaments free for 2.5–3.5 mm. **Pistil** slightly exserted beyond stamens, 8.5–11.0 mm long; style bearded on upper surface; ovary weakly falcate, glabrous; ovules 11–12. **Pod** oblong or oblanceolate, laterally compressed, often weakly falcate, brown, dark brown, or black, usually indehiscent, 11.0–15.0 × 3.5–5.5 mm; beak on adaxial suture, stout, pungent, < 1 mm long. **Seeds** oblong-reniform, 3–11 per pod, dull yellow or orange, brown-green, or olive green, often with black mottling, 2.0–2.5 × 1.5–2.0 mm.

SIMILAR TAXA

C. monroi is similar to *C. astonii* G.Simpson and *C. vexillata* Heenan. From *C. astonii* it is distinguished by its smaller habit, cladodes, and flowers; and from *C. vexillata* by the triangular or broad-triangular stipules.

FLOWERING

November–January

FLOWER COLOURS

Violet/Purple, White

FRUITING

December–May

LIFE CYCLE

Seeds are possibly dispersed by wind and granivory (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

Easily grown from seed and hardwood cuttings. A beautiful shrub, which deserves wider cultivation.

ETYMOLOGY

carmichaelia: After Carmichael, a botanist

monroi: Named after Sir David Monro who was a 19th century New Zealand politician

WHERE TO BUY

Not Commercially available.

ATTRIBUTION

Description adapted from Heenan (1995).

REFERENCES AND FURTHER READING

- Heenan PB. 1995. A taxonomic revision of *Carmichaelia* (Fabaceae - Galegeae) in New Zealand (part I). *New Zealand Journal of Botany* 33(4): 455–475. <https://doi.org/10.1080/0028825X.1995.10410618>.
- Thorsen MJ, Dickinson KJM, Seddon PJ. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285–309. <https://doi.org/10.1016/j.ppees.2009.06.001>.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/carmichaelia-monroi/>