

Carmichaelia uniflora

COMMON NAME

Dwarf broom

SYNONYMS

Carmichaelia uniflora var. *suteri* (Colenso) G.Simpson; *Carmichaelia uniflora* Buchanan; *Carmichaelia suteri* Colenso

FAMILY

Fabaceae

AUTHORITY

Carmichaelia uniflora Kirk

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

CRMUNI

CHROMOSOME NUMBER

2n = 96

CURRENT CONSERVATION STATUS

2017 | At Risk – Declining | Qualifiers: DP

PREVIOUS CONSERVATION STATUSES

2012 | At Risk – Declining | Qualifiers: DP

2009 | Data Deficient

2004 | Not Threatened

BRIEF DESCRIPTION

Very small (to 6cm tall) low-growing cushion with scattered erect small flattened twigs that barely poke above the surrounding vegetation. Twigs short, 1-2mm wide. Flowers usually solitary, pea-like, purple-striped. Fruit a small dry sharp-tipped pod which splits widely to release the 4-6 hard seeds.

DISTRIBUTION

Endemic. New Zealand: South Island (Nelson, Canterbury, Otago, and Southland).

HABITAT

Inhabiting stable but unconsolidated, sparsely vegetated river bed gravels, outwash fans, terraces, and stony ground.



Waimakariri river, January. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



Selwyn District, Canterbury. Photographer: Jane Gosden, Licence: CC BY-NC.

DETAILED DESCRIPTION

Dwarf, rhizomatous shrub, up to 20-60 mm tall and 1 m wide, forming a dense mat or tufts of cladodes. Rhizomes becoming increasingly stout and woody with age, 50.0-200.0 × 1.0-2.5 mm. Cladodes filiform, linear, striate, compressed, erect to spreading, green to green-yellow, glabrous, 20.00-60.00 × 0.75-2.00 mm; apex subacute, yellow to yellow-green; leaf nodes 2-14. Leaves simple, broad-obovate to broad-elliptic, fleshy, entire, green, present on seedlings, absent on mature plants, 5.5-8.0 × 3.0-5.0 mm; both surfaces with scattered hairs; apex emarginate to retuse; base cuneate to narrow-obtuse; petiole sparsely hairy, 2.0-2.5 mm long. Leaves on cladodes reduced to a scale, triangular, glabrous, 0.6-1.5 × 0.8-1.4 mm; apex acute. Inflorescence a raceme, 1 per node, each with 1-2 flowers. Peduncle glabrous, occasionally sparsely hairy, green, 4-15 mm long. Bracts, triangular, glabrous, pale green, 0.5-0.8 × 0.5-0.8 mm; apex acute; margin hairy. Pedicel glabrous, occasionally sparsely hairy, pale green, 3.0-7.5 mm long. Bracteoles at top of pedicel, triangular to narrow triangular, glabrous, green and occasionally flushed red, 0.2-0.3 × 0.1-0.2 mm; apex acute; margin hairy. Calyx campanulate, c.2.5 × c.2.5 mm; inner surface glabrous, green; outer surface glabrous or sparsely hairy, green. Calyx lobes triangular, flushed red, c.0.5 mm long; apex acute; margin hairy or glabrous. Bud green. Standard obovate, patent, 8-10 × 6-8 mm; upper surface white, central area purple, sometimes purple-green veined; lower surface green, margin cream-green, sometimes purple-green veined; apex retuse; claw pale green, c. 1.5 mm long. Wings oblong, shorter than keel, 5.0-6.5 × c.2.0 mm; distal area of adaxial surface purple, proximal area green; abaxial surface white, sometimes purple-veined; auricle triangular, pale green, apex obtuse, c.1.25 mm long; claw pale green, 2.0-2.5 mm long. Stamens 7.5-9.0 mm long; lower filaments connate for c. 2A length and outside filaments free for 1.5-2.5 mm. Pistil exerted beyond stamens, c.10 mm long; style with a ring of hairs below stigma; ovules 9-11. Pod elliptic-oblong, laterally compressed, weakly falcate, black, brown, or grey, one valve dehiscent from base, 7.5-13.0 × 3.0-4.0 mm; beak on adaxial suture, slightly upturned, stout, pungent, 1.5-2 mm long. Seeds oblong-reniform, 2-9 per pod, black, brown, tan, or olive green, 1.2-2.0 × 1.0-1.5 mm.

SIMILAR TAXA

Distinguished from *C. corrugata* Colenso by its narrower, thread-like rhizome; strongly dehiscent pod; cladodes which are narrower, thread-like, much less robust, often shorter, and green in colour; and by the usually single-flowered inflorescence.

FLOWERING

October - March

FLOWER COLOURS

Violet/Purple, White

FRUITING

November - May

PROPAGATION TECHNIQUE

Easily grown from seed and hardwood cuttings.

THREATS

Probably threatened. However, there is insufficient data available to make an accurate assessment. It is known to be at risk from browsing animals and competition from weeds such as pasture grasses.

ETYMOLOGY

carmichaelia: After Carmichael, a botanist

uniflora: Single-flowered

ATTRIBUTION

Description adapted from Heenan (1995)

REFERENCES AND FURTHER READING

Heenan, P.B. 1995: A taxonomic revision of *Carmichaelia* (Fabaceae - Galegeae) in New Zealand (part I). *New Zealand Journal of Botany* 33: 455-475.

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(4): 285-309.

MORE INFORMATION

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