

# Carmichaelia carmichaeliae

## COMMON NAME

pink broom

## SYNONYMS

*Notospartium carmichaeliae* Hook.f.

## FAMILY

Fabaceae

## AUTHORITY

*Carmichaelia carmichaeliae* (Hook.f.) Heenan

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

## NVS CODE

CARCAR

## CHROMOSOME NUMBER

$2n = 32$

## CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Critical | Qualifiers: RF, RR

## PREVIOUS CONSERVATION STATUSES

2012 | Threatened – Nationally Critical | Qualifiers: RF, RR

2009 | Threatened – Nationally Critical | Qualifiers: RF, RR

2004 | Threatened – Nationally Vulnerable

## BRIEF DESCRIPTION

Rare small tree with untidy, greenish-yellow leafless twigs inhabiting valleys in Marlborough. Twigs oval in cross section, smooth, tending to droop. Flowers small, pink with darker streaks, clustered into conspicuous sprays. Fruit in a 1-4cm long dry flattened pod containing up to 10 hard black mottled seeds.

## DISTRIBUTION

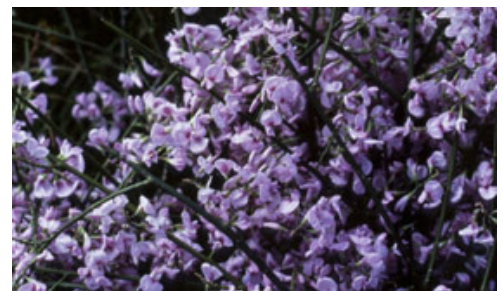
Endemic. South Island, Marlborough, north of the Awatere fault.

## HABITAT

Lowland to montane. A species of alluvial terraces, gorges, cliff faces and steep valley sides.



Flowering adult specimen of *Carmichaelia carmichaeliae*. Photographer: Cathy Jones, Licence: CC BY.



Close up of the flowers of *Carmichaelia carmichaeliae*. Photographer: Cathy Jones, Licence: CC BY.

## DETAILED DESCRIPTION

Leafless, spreading to upright, shrub or small tree up to 5 m tall. Branchlets slender, 120–400 × 1.8–4.0 mm, drooping, green, compressed. Leaves on branchlets reduced to a triangular scale, glabrous, < 0.8 mm long. Inflorescence a raceme, up to 30 mm long, with up to 20 flowers; pedicel 1.0–3.5 mm long, sparsely hairy. Calyx 1.5–2.4 × 1.5–2.4 mm, outer surface sparsely hairy to glabrescent, or glabrous, green; lobes 0.4–0.6 mm long, triangular. Flowers pink with dark pink veins, up to 8 mm long. Standard 7.0–7.5 × 6.3–6.6 mm, obovate, recurved; wings 5.3–7.8 × 1.0–1.7 mm, oblong, shorter than keel; keel 6.6–8.5 × 2.1–3.2 mm. Stamens 6.0–7.5 mm long. Pistil 7.8–8.4 mm long, exerted beyond stamens, ovary glabrous. Pods 10.0–36.0 × 2.5–4.0 mm, linear, laterally compressed, constricted between the seeds, the seed outline often visible through the dry fruit wall, and the lower filaments are usually persistent on mature fruits, indehiscent; beak up to 4 mm long, narrowly triangular, tapering to the persistent style; with up to 10 seeds. Seeds 2.0–3.5 mm long, reniform to reniform-triangular, light green-yellow, buff or orange-brown, often with black mottling.

## SIMILAR TAXA

*Carmichaelia carmichaeliae* and *C. glabrescens* have a similar growth habit, branchlets, and flowers. *Carmichaelia carmichaeliae* differs from *C. glabrescens* by the pods being weakly constricted between the seeds, the seed outline often visible through the dry fruit wall, and the lower filaments are usually persistent on mature fruits. *C. glabrescens* pods are shorter and broader, there are no constrictions between seeds, the seed outline is not visible through the fruit wall, and the lower filaments are usually absent from mature fruits. *C. glabrescens* grows south of the Awatere fault.

## FLOWERING

November to January

## FLOWER COLOURS

Red/Pink

## FRUITING

January to December

## LIFE CYCLE

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

## PROPAGATION TECHNIQUE

Easy from fresh seed. Semi hardwood cuttings can be struck with difficulty. An excellent species for a steep, free draining bank, cliff face or rock wall. Does well in any soil provided it is free draining. This species should be planted in full sun. It is intolerant of heavy shade and humidity.

## THREATS

Threatened by aerial spraying for gorse (*Ulex europaeus* L.) and broom (*Cytisus scoparius* (L.) Link), browsing animals, (especially goats, cattle, possums and deer) and habitat loss through competition from weeds.

## ETYMOLOGY

**carmichaelia**: After Carmichael, a botanist

## WHERE TO BUY

Occasionally available from specialist native plant nurseries.

## ATTRIBUTION

Fact Sheet prepared for NZPCN by P.J. de Lange 1 July 2007. Description by P.B. Heenan based on Allan (1961) and published in de Lange et al. (2010)

## REFERENCES AND FURTHER READING

- Allan, H.H. 1961: Flora of New Zealand. Vol. I. Wellington, Government Printer.
- de Lange, P.J.; Heenan, P.B.; Norton, D.A.; Rolfe, J.R.; Sawyer, J.W.D. 2010: Threatened Plants of New Zealand. Canterbury University Press, Christchurch.
- 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

### NZPCN FACT SHEET CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Carmichaelia carmichaeliae* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network.

<https://www.nzpcn.org.nz/flora/species/carmichaelia-carmichaeliae/> (Date website was queried)

### MORE INFORMATION

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