

Carmichaelia muritai

COMMON NAME

Coastal tree broom

SYNONYMS

Chordospartium muritai A.W.Purdie

FAMILY

Fabaceae

AUTHORITY

Carmichaelia muritai (A.W.Purdie) Heenan

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

CARMUR

CHROMOSOME NUMBER

$2n = 32$

CURRENT CONSERVATION STATUS

2012 | Threatened – Nationally Endangered | Qualifiers: CD, RF, RR

PREVIOUS CONSERVATION STATUSES

2009 | Threatened – Nationally Endangered | Qualifiers: CD, RF, RR

2004 | Threatened – Nationally Critical

BRIEF DESCRIPTION

Rare small tree with many erect brownish leafless twigs inhabiting the coastal Kaikoura area. Twigs oval in cross section, smooth, lower twigs drooping. Flowers small, pea-like, pink with darker centre, clustered into conspicuous long spikes. Fruit a small dry pod containing 1-2 hard yellowish seeds.

DISTRIBUTION

Endemic. South Island, Marlborough, vicinity of Clifford Bay

HABITAT

Deeply eroded coastal cliffs on coarse, free draining gravel and loess, colluvial fans below cliffs.



Photo of flowering branch. Photographer: Jan Clayton-Greene



Photographer: Barbara Mitcalfe

FEATURES

Leafless tree 5-6 m tall. Trunk, stout up to 250 mm diam. Branches numerous, grey-brown, uppermost erect, lower drooping. Bark smooth with raised rings at nodes. Branches compact, striate, deeply grooved, flat to round, 3.5 mm wide, grey-green maturing yellow-green, densely hairy, bearing stipules at emergent shoots. Leaves reduced to scales on mature shoots. Inflorescences lateral, erect, racemes up to 70 mm; solitary or in groups on flowering shoots arising at nodes. Flowers 4 x 4 mm. Peduncles hairy, 0.8 mm long; pedicels 1 mm, hairy. Calyx rim and outer tube hairy. Petals white with purple-violet markings toward standard and keel; veins of petals violet; standard suborbicular, longer than wings, margins reflexed; wings dolabriform, obtuse. Fruit a stramineous upturned, obliquely obovate 3.5 x 1.8 mm, greyish-white, pod. Seeds 1(-2) per pod, yellow-green, reniform, 1.5 x 1 mm.

SIMILAR TAXA

Allied to *C. stevensonii* (Cheeseman) Heenan from which it differs by its erect upper branchlets and racemes. It is also a smaller tree with brownish-grey branches; *C. stevensonii* grows up to 15 m tall and has yellowish-green branches. The flowers of *C. muritai* are smaller (4 x 4 cf. 8 x 6 mm), and whitish rather than lavender, while the pods, which usually bear 1(-2) rather than 1-3 seeds, are 3.5 x 1.8 rather than 2.5 x 2 mm.

FLOWERING

December – January

FLOWER COLOURS

Violet/Purple, White

FRUITING

Present throughout the year

LIFE CYCLE

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

PROPAGATION TECHNIQUE

Easy from fresh seed. The hard seed coat should be chipped or sanded to expose the endosperm, this action greatly increases the chances of germination success. It can be grown from hard wood cuttings but these are difficult to strike. Best planted in a free draining, fertile soil in a sunny, sheltered position. Although it does well in exposed sites, better results seem to be obtained from specimens planted next to a wall or with some shelter from strong winds. Once planted this species does not transplant well, and it resents any form of root disturbance. Like many native brooms that have evolved in the drier eastern South Island, this species does not thrive in humid climates.

THREATS

Only two small natural populations are known. One is seriously threatened by goats, summer drought, coastal erosion and weeds. The other though thriving is vulnerable to fire. All parts of *C. muritai*, though the seedlings especially, are highly sought after by browsing animals such as possums, goats, sheep, rabbits and hares.

ETYMOLOGY

carmichaelia: After Carmichael, a botanist

WHERE TO BUY

Occasionally available from retail and specialist native plant nurseries.

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange 1 October 2003. Description adapted from Purdie (1985) - see also de Lange et al. (2010).

REFERENCES AND FURTHER READING

- de Lange, P.J.; Heenan, P.B.; Norton, D.A.; Rolfe, J.R.; Sawyer, J.W.D. 2010: Threatened Plants of New Zealand. Christchurch, Canterbury University Press. 471pp.
- Purdie, A.W. 1985: *Chordospartium muritai* (Papilionaceae) a rare new species of New Zealand tree broom. *New Zealand Journal of Botany* 23: 157-161
- 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 muritai* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/carmichaelia-muritai/> (Date website was queried)

MORE INFORMATION

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