

# 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

2017 | Threatened – Nationally Endangered | Qualifiers: CD, RF, RR

## PREVIOUS CONSERVATION STATUSES

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

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.

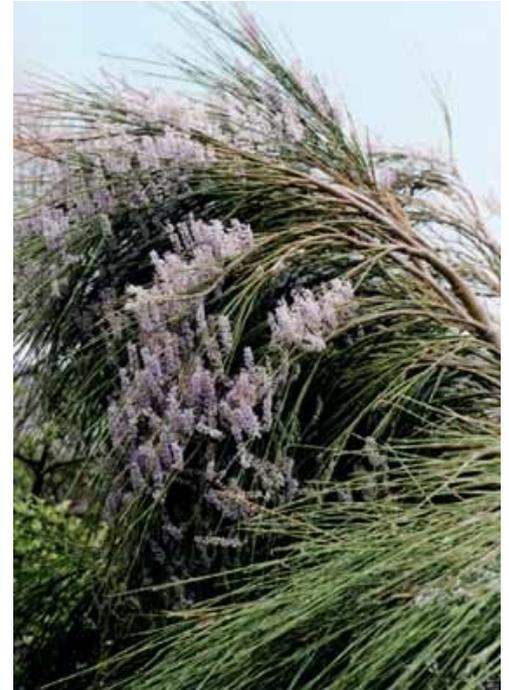
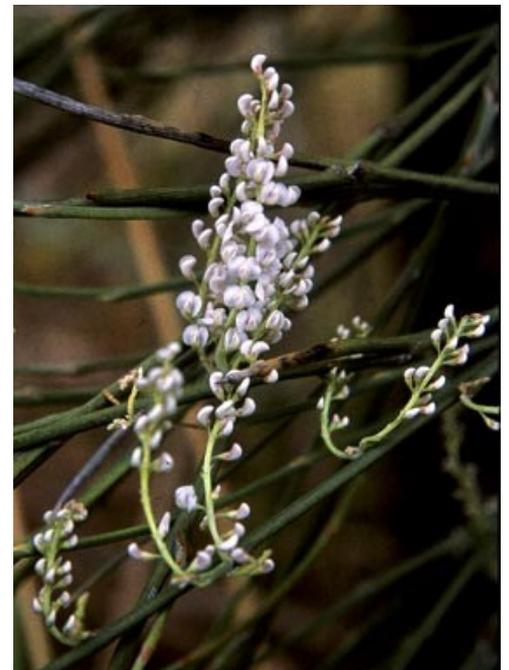


Photo of flowering branch. Photographer: Jan Clayton-Greene, Licence: CC BY-NC.



Photographer: Barbara Mitcalfe, Licence: CC BY-NC.

## DETAILED DESCRIPTION

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/>