

# Carmichaelia stevensonii

## COMMON NAME

weeping tree broom, cord broom

## SYNONYMS

Chordospartium stevensonii Cheeseman

## FAMILY

Fabaceae

## AUTHORITY

Carmichaelia stevensonii (Cheeseman) Heenan

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

## NVS CODE

CARSTE

## CHROMOSOME NUMBER

2n = 32

## CURRENT CONSERVATION STATUS

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

## PREVIOUS CONSERVATION STATUSES

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

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

2004 | Gradual Decline

## BRIEF DESCRIPTION

Rare small tree with weeping leafless twigs inhabiting south Marlborough Valleys. Bark on young branches with orange stripes. Twigs 2mm wide, grooved, rounded, drooping. Flowers white with purple streaks, in drooping spikes. Fruit a small dry sharp-tipped hairy pod containing a single hard seed.

## DISTRIBUTION

Confined to inland river valleys of South Marlborough.

## HABITAT

In low scrub or sparsely vegetated sites overlying free draining colluvial or alluvial soil, rockland, and steep mountain slopes.



Close up of flowers. Photographer: Shannel Courtney, Licence: CC BY-NC.



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## DETAILED DESCRIPTION

Leafless tree to 8-10 m tall with stout, sparingly branching trunk to 400 mm diameter and compact canopy of drooping, pendulous branchlets. Branches stout, initially erect soon drooping; grey-brown when mature, with relatively smooth bark and conspicuous raised rings at nodes; actively growing branches yellowish-grey to yellow-green with dark orange striae; bark chartaceous. Branchlets numerous, pendulous, striate, deeply grooved, subterete to 2 mm diameter yellowish-grey to grey-green. Stipules clasping shoot, 0.5 × 0.3 mm, elongate-triangular, pointed, tomentose on undersides, chartaceous, eventually fraying off with age. Leaves early deciduous, simple, emarginate, alternate, initially folded along midrib but gradually expanding and increasing in size to c.9 × 6 mm, sparsely hairy on upper surface, more densely so on undersides; petioles hairy, fleshy, ± cylindric, to 3 mm long. Leaves reduced to scales on mature shoots. Inflorescences in simple, lateral, pendulous compact, densely-flowered racemes up to 100 mm long; racemes solitary or in fascicles on peduncles arising directly from nodes on mature branchlets, mostly drooping. Occasionally erect or with the tips ascending. Flowers c.9 × 6 mm; pale lavender, with darker veins and markings. Peduncles pilose; pedicels c.0.5-0.9 mm long, pilose, arising in axils of peduncle scales. Rim and outer surface of calyx tube pilose. Petals whitish with intense lavender or violet markings towards base of standard and keel; veins of all petals dark lavender; standard orbicular, longer than wings, with margins reflexed; wings dolabriform, falcate, obtuse < keel, keel incurved, obtuse, ± the same length as the standard. Ovary sericeous; style long, slender, incurved, glabrate; stigma glabrous; ovules c.5. Pod turgid, rhomboid to suborbicular; immature pods grey-green, style often long-persistent, breaking off near its base leaving a stout, blunt, slightly upturned beak c.1 mm long; mature pod subcoriaceous, stramineous, densely hairy, obliquely obovate, 6 × 3-4 mm including beak; the withered calyx, corolla and stamens remaining long-attached to the pod base. Seeds reniform, oblong or triangular, 1-3 per pod, yellow-green, dark yellow, brown, orange, orange-brown or red-brown, spotted grey brown, red-brown or black, rarely unspotted, 1.7-2.0 mm.

## SIMILAR TAXA

*Carmichaelia stevensonii* is distinguished from *C. muritai* (A.W.Purdie) Heenan, by the yellow-green, drooping branchlets and flower clusters. Actively growing branchlets of this plant have very distinctive bark with vertical orange stripes. *C. muritai* branches are initially erect with the apices drooping, the inflorescences are erect, the flowers 4 × 4 mm; whitish with intense purple-violet markings rather than whitish with lavender markings; the pods are 3.5 × 1.8 mm (cf. 6 × 3-4 mm), and usually 1-seeded rather than 1-3 seeded.

## FLOWERING

December - January

## FLOWER COLOURS

Violet/Purple, White

## FRUITING

March - May

## LIFE CYCLE

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

## PROPAGATION TECHNIQUE

Easy from fresh seed. Can be grown with some difficulty from semi hardwood cuttings. Dislikes humidity and once established should not be moved.

## THREATS

Under serious threat from browsing animals such as wild goats. At some lower-elevation sites little regeneration is happening due to introduced grasses which outcompete seedlings and colonise fresh disturbed ground in which seedlings would normally germinate. Recent field surveys suggest this species is much more threatened than had previously been believed.

## ETYMOLOGY

**carmichaelia**: After Carmichael, a botanist

## ATTRIBUTION

Description based on fresh flowering material and herbarium specimens.

## REFERENCES AND FURTHER READING

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-stevensonii/>