

Carmichaelia compacta

COMMON NAME

Cromwell broom

SYNONYMS

Huttonella compacta (Petrie) Kirk; *Carmichaelia compacta* var. *procumbens* G.Simpson

FAMILY

Fabaceae

AUTHORITY

Carmichaelia compacta Petrie

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

CARCOP

CURRENT CONSERVATION STATUS

2017 | At Risk – Naturally Uncommon | Qualifiers: RR

PREVIOUS CONSERVATION STATUSES

2012 | At Risk – Naturally Uncommon | Qualifiers: RR

2009 | At Risk – Declining | Qualifiers: DP, RF, RR

2004 | Range Restricted

BRIEF DESCRIPTION

Small yellow-green shrub with many erect leafless twigs inhabiting the Central Otago gorges. Twigs oval in cross section, grooved. Leaves rare, sometimes in shaded parts, with 1-9 leaflets. Flowers small, pea-like, pink with slightly darker stripes, in erect clusters. Fruit a small dry flattened pod containing a single hard seed.

DISTRIBUTION

Endemic. New Zealand: South Island (Central Otago (centred on the Kawarau and Cromwell Gorges and immediate surrounding area, also near Alexandra, Omakau, and Cromwell))

HABITAT

A schist endemic. Colonising rock and debris slopes, rock outcrops, and associated steep tussock grassland, and river gorges.



A flowering plant Kawarau Gorge (November).
Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



Kawarau Gorge (November). Photographer:
John Smith-Dodsworth, Licence: CC BY-NC.

DETAILED DESCRIPTION

Erect or spreading shrub, up to 1-2 x 1-2 m, with densely placed branches and cladodes. Branches erect and spreading from base, 10-60 mm diameter. Cladodes linear, striate, compressed, erect to spreading, green, glabrous, often crowded at ends of branches, 60-220 x 1.5-2.5 mm; apex subacute, yellow; leaf nodes 4-9. Leaves 1-9-foliolate, fleshy, obovate or sometimes ovate, hairy; upper surface mottled; lower surface green; apex emarginate to retuse; margin hairy; leaflets sessile or with short petiolule, 1.5-7.0 x 1.0-6.5 mm; petiole hairy, 8-16 mm long. Leaves on cladodes reduced to a scale, triangular, glabrous, < 0.5 mm long; apex acute. Stipules clasping shoot, triangular, 0.4-0.5 x 0.4-0.5 mm; adaxial surface glabrous; abaxial surface hairy, becoming glabrous with age; apex subacute to obtuse; margin hairy. Inflorescence a raceme, 1 per node, each with 3-6 flowers. Peduncle glabrous to sparsely hairy, green, 7-16 mm long. Bracts triangular to narrow-triangular, pale green becoming membranous, 0.5-1 mm long; apex acute to subacute; margin hairy. Pedicel glabrous, pale green, 2-4 mm long. Bracteoles at base of receptacle or on upper part of pedicel, narrow rounded, white, c. 0.25 mm long; claw pale green, c. 2 mm long. Stamens 3.0-3.5 mm long; lower filaments connate for c. 1/3 length and with outside filaments free for 0.3-0.5 mm. Pistil exerted beyond stamens, c. 4 mm long; style with a ring of hairs below stigma; ovules 6-7. Pod obovate, broad at distal part, dorsally compressed, brown, pale grey, or straw-coloured, indehiscent, with inflated valves, 5.0-5.5 x 3.0-4.0 mm; beak on upper suture, slightly curved, stout, pungent, c. 1 mm long. Seeds oblong-reniform, 1-2 per pod, light olive green or yellow-green with black mottling, 2.0-2.5 x 1.5-2.0 mm.

SIMILAR TAXA

Carmichaelia compacta is similar to *C. curta* Petrie and *C. juncea* Hook.f. from which it is distinguished by its more upright and shrubby habit, green and densely placed cladodes, large obovate pods, large seed, and the lower filaments being connate for c. 1/3 of their length.

FLOWERING

October - February

FLOWER COLOURS

Violet/Purple, White

FRUITING

December - July

LIFE CYCLE

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

PROPAGATION TECHNIQUE

Easily grown from seed and hardwood cuttings. Dislikes humidity. Best in a well drained, sunny situation. An attractive species that deserves to be more widely grown.

THREATS

A narrow range endemic that is known from many sites but with an combined overall small population. Seedlings and juveniles are scarce, and there appears to be little recruitment. At accessible sites it is heavily browsed by sheep, goats, hares, and rabbits and these animals are probably the main reason for the lack of recruitment. Further, browsing pressure may be causing early senescence of older plants.

ETYMOLOGY

carmichaelia: After Carmichael, a botanist

compacta: Small growing

WHERE TO BUY

Not Commercially Available.

ATTRIBUTION

Description from Heenan (1996)

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* 2009 Vol. 11 No. 4 pp. 285-309

MORE INFORMATION

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