Carmichaelia compacta

COMMON NAMES
Cromwell broom

BIOSTATUS
Native – Endemic taxon

CURRENT CONSERVATION STATUS
2023 | At Risk – Naturally Uncommon | Qualifiers: RR
Jump to previous conservation statuses

CATEGORY
Vascular

STRUCTURAL CLASS
Trees & Shrubs - Dicotyledons

SIMPLIFIED 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.

FLOWER COLOURS
Violet/Purple, White

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.¨þ length and with outside filaments free for 0.3-0.5 mm. Pistil exserted 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.

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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.¨þ of their length.

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.

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.

GENUS
Carmichaelia

FAMILY
Fabaceae

AUTHORITY
Carmichaelia compacta Petrie

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

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

FLOWERING
October - February

FRUITING
December – July

LIFE CYCLE AND DISPERSAL
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.

ETYMOLOGY
carmichaelia: After Carmichael, a botanist
compacta: Small growing

NVS CODE
CARCOP

PREVIOUS CONSERVATION STATUSES

2017 | At Risk – Naturally Uncommon | Qualifiers: RR
2012 | At Risk – Naturally Uncommon | Qualifiers: RR
2009 | At Risk – Declining | Qualifiers: DP, RF, RR
2004 | Range Restricted
Jump to current conservation status

REGIONAL CONSERVATION STATUSES

Otago: 2025 | Regionally At Risk – Regionally Declining | Qualifiers: NStr, PD, PF, RE, RF, RR, TL Help
The regional threat classification system leverages off the national assessments in the NZTCS, providing information relevant for the regional context. Otago conservation status information is sourced from the "Conservation Status of Indigenous Vascular Plants in Otago, 2025" Jarvie S et al. (2025) report.

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

ATTRIBUTION

Description from Heenan (1996)

MORE INFORMATION

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

PDF DATE

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