

Epilobium cockayneanum

COMMON NAME

willowherb

SYNONYMS

Epilobium cockaynianum Petrie (orthographic variant)

FAMILY

Onagraceae

AUTHORITY

Epilobium cockayneanum Petrie

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

NVS CODE

EPICOC

CHROMOSOME NUMBER

2n = 36

CURRENT CONSERVATION STATUS

2017 | Data Deficient

PREVIOUS CONSERVATION STATUSES

2012 | Data Deficient

2009 | Not Threatened

2004 | Not Threatened

BRIEF DESCRIPTION

A poorly known species, easily mistaken for other similar *Epilobium* species, but with a fairly small distributional range. Characterised by its creeping much branched tufted habit, with close set broadly ovate, ovate-elliptic to ovate-oblong, distinctly and obviously toothed leaves, and brown capsules.

DISTRIBUTION

Endemic. New Zealand: North Island (from southern Ruahine Ranges south), South Island (Marlborough and northern Canterbury). Mostly easterly.

HABITAT

Montane to alpine in grassland and herbfield. preferring open ground.



DETAILED DESCRIPTION

Tufted perennial herb. **Stems** numerous, close set, initially decumbent, then ascending and/or erect, 100–250 mm long, pale green or reddish, indumentum bifariously to uniformly pubescent, glabrescent. **Leaves** opposite, crowded or widely spaced and approximate in lower part of stem, alternate within inflorescence, sessile or petiolate with petioles less than or equal to 1 mm long; lamina 5–14 × 3–8 mm, green, dark green or reddish green (sometimes red-brown), broadly ovate to ovate-elliptic or ovate-oblong, membranous, glabrous, margins irregularly, often widely and obscurely toothed. **Flowers** erect, ± 4–6 mm diameter; sepals lanceolate; petals white or rose-pink, usually ± 2× length of sepals. **Capsules** 25–50 mm long, brown, glabrous or sparsely, minutely puberulent and then glabrate; pedicels 20–40 mm long, red-brown or reddish, minutely puberulent.

SIMILAR TAXA

Epilobium cockayneanum was merged with *E. atriplicifolium* into *E. alsinoides* as *E. alsinoides* subsp. *atriplicifolium* by Raven & Raven (1976). Here *E. atriplicifolium* is treated as a distinct species with which *E. cockayneanum* is most closely allied. *Epilobium cockayneanum* differs from *E. atriplicifolium* by its close-set, much branched, tightly matted, tufted growth habit; leaves which are more deeply toothed and broadly ovate, ovate-elliptic to ovate-oblong rather than weakly toothed and narrowly elliptic to linear leaves and 5–14 × 6–8 mm cf. 8–18 × 4–5 mm in *E. atriplicifolium*. *Epilobium cockayneanum* is virtually confined to the higher elevation sites of the North Island but it is widely sympatric with *E. atriplicifolium* and *E. tenuipes* in the South Island, and less frequently with *E. alsinoides* and *E. atriplicifolium* in the North Island, where as Raven & Raven (1976) note, these taxa “are sharply distinct”.

FLOWERING

November–March

FLOWER COLOURS

White

FRUITING

November–May

LIFE CYCLE

Minute papery seeds are wind dispersed (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

Easily grown from fresh seed and rooted pieces. Susceptible to powdery mildew in humid climates. Otherwise inclined to become weedy.

ETYMOLOGY

epilobium: From the Greek epi- ‘upon’ and lobos ‘a pod’, the flowers appearing to be growing on the seed pod.

cockayneanum: Named after Leonard Cockayne FRS (7 April 1855 - 8 July 1934) who is regarded as New Zealand’s greatest botanist and a founder of modern science in New Zealand

WHERE TO BUY

Not commercially available.

NOTES ON TAXONOMY

Raven & Raven (1976) treated *Epilobium cockayneanum* as part of their concept of *E. alsinoides* subsp. *atriplicifolium* (A.Cunn.) P.H.Raven et Engelhorn. This concept is not followed here where *E. alsinoides* A.Cunn., *E. atriplicifolium* A.Cunn., *E. elegans* Petrie, and *E. tenuipes* Hook.f. are all regarded as species. This follows on from the extensive field work, and mostly unpublished opinions of the late A.P. (Tony) Druce who studied New Zealand epilobia extensively in the field and in cultivation. Although Raven & Raven (1976) had adopted an understandably broad concept of *E. alsinoides*, they had failed to recognize that those species allied to it or segregated from it retained their morphological and ecological distinctions and, aside from disturbed areas where hybridisation between them was sometimes common, they remained stable “units” elsewhere. Elsewhere in their treatment, Raven & Raven (1976) accepted at species rank other epilobia which also frequently hybridize, sometimes forming complex introgressive swarms in sites of prolonged human-induced disturbance, suggesting that their treatment of *E. alsinoides* and its allies was somewhat contradictory. That said, it should be noted that the treatment offered here is based entirely on the work of Druce (Druce 1993), which is mostly unpublished, and that, as a whole, New Zealand’s indigenous epilobia are still in need of a critical taxonomic review, ideally using DNA based methodologies from which to develop a sound framework.

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange 1 September 2011. Description adapted from Allan (1961).

REFERENCES AND FURTHER READING

- Allan HH. 1961. Flora of New Zealand, Volume I. Indigenous Tracheophyta: Psilopsida, Lycopsidea, Filicopsida, Gymnospermae, Dicotyledones. Government Printer, Wellington, NZ. 1085 p.
- Druce AP. 1993. Indigenous vascular plants of New Zealand. Ninth Revision. Unpublished Checklist held at Landcare Research, Lincoln, New Zealand.
- Raven PH, Raven TE. 1976. The genus *Epilobium* in Australasia. *New Zealand DSIR Bulletin 216*. Government Printer, Wellington, NZ. 321 p.
- Thorsen MJ, Dickinson KJM, Seddon PJ. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics 11*: 285–309. <https://doi.org/10.1016/j.ppees.2009.06.001>.

NZPCN FACT SHEET CITATION

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<https://www.nzpcn.org.nz/flora/species/epilobium-cockayneanum/> (Date website was queried)

MORE INFORMATION

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