

# Epilobium krulleanum

## COMMON NAME

willowherb

## FAMILY

Onagraceae

## AUTHORITY

Epilobium krulleanum Hausskn.

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

Yes

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

## CHROMOSOME NUMBER

2n = 36

## CURRENT CONSERVATION STATUS

2017 | Data Deficient

## PREVIOUS CONSERVATION STATUSES

2012 | Data Deficient

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. New Zealand: South Island (eastern from the headwaters of the Awatere and Clarence Rivers south through Hanmer, Canterbury and Central Otago).

## HABITAT

Montane to alpine on stony ground, in tussock grassland, in frost flats and on rock outcrops in open country.

## DETAILED DESCRIPTION

Tufted, perennial herb 60-195 mm tall, much-branched from woody base, perennating from basal buds; stems densely leafy, initially decumbent, soon becoming erect; plants ± densely covered throughout with short, crisp, erect or appressed hairs, mostly confined to lines decurrent from the margins of the petioles, especially on upper part of stem. Leaves opposite, those within inflorescence alternate, coriaceous, longer than or equal to the stem internodes; lateral veins not prominent, 2-3 on each side of the midrib; petiole 0-3 mm; lamina 3-20 × 1-4 mm, glaucous to dark purple-green, ovate or ovate-oblong, base attenuate, apex subacute to rounded, entire or obscurely, serrulate, and then with 3-8 weak teeth on each side. Inflorescence erect, the flowers confined to the upper portion stem. Flowers erect. Ovaries 6.5-15.2 mm long, finely and uniformly stigulose, pedicellate, pedicels 1.3-7.1 mm long. Floral tube 0.6-1.3 × 1.9-2.5 mm, adaxially strigulose. Sepals 3.8-4.5 × 2.7-4.2 mm, ovate-lanceolate, not keeled, strigulose. Petals 5.6-9.0 × 3.8-5.5 mm, pink, darkening to rose-pink after pollination, notch 1.2-1.6 mm deep. Stamen filaments white, of two types: long (1.8-4.0 mm long) and short (1.3-2.5 mm long). Anthers 0.6-1.4 × 0.5-0.8 mm, cream. Style 2.8-6.0 mm long, white; stigma 1.0-2.5 × 0.6-0.7 mm, white, clavate, surrounded by the longer or both sets of stamens at anthesis. Capsule 18-28 mm long, glaucous, glabrous, stiffly erect, on a pedicel 6-18 mm long. Seeds 1.3-1.8 mm long, brown, obovate, apex rounded, base subacute, papillate; coma 6-8 mm long, white, caducous.



## SIMILAR TAXA

Allied to *Epilobium hectorii* which is where Raven & Raven (1976) included it. However, it is distinguished from *Epilobium hectorii* by its pink flowers (which flush rose-pink after pollination), distinctly larger (5.6-9.0 × 3.8-5.5 mm cf. 2.5-8.2 × 1.8-4.3 mm) petals, which are more deeply notched (1.2-1.6 mm cf. 0.9-1.4 mm in *E. hectorii*) and by its larger seeds (1.3-1.8 mm cf. 0.8-1.3 mm in *E. hectorii*) which are brown rather than orange or orange-brown, and distinctly papillate rather than finely reticulate. In *Epilobium krulleanum* the coma is also longer (6-8 mm cf. 4-6 mm long in *E. hectorii*). Both species are occasionally sympatric in part of their range, though as a rule *Epilobium krulleanum* has a more restricted range, and it is more common in Marlborough than elsewhere.

## FLOWERING

December - January

## FRUITING

December - April

## LIFE CYCLE

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

## PROPAGATION TECHNIQUE

Easily grown from fresh seed. Dislikes humid conditions.

## THREATS

Although *Epilobium krulleanum* is regarded as Not Threatened, partly because of its merger with the very common and widespread *E. hectorii* by Raven & Raven (1976) the species has been overlooked by most field botanists over the last 35 or so years. Therefore accurate information about the status of *E. krulleanum* is lacking, and the species may yet be better referred to as "Data Deficient" to encourage botanists to survey for the species. Many of the habitats it was recorded from in the past are now heavily modified and in some of these places, e.g., Broken Hill and the Tresslick Basin, brief searches for the species in 2000 did not rediscover it.

## ETYMOLOGY

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

## WHERE TO BUY

Not commercially available

## NOTES ON TAXONOMY

Raven & Raven (1976) adopted a very conservative treatment for New Zealand *Epilobium*, nevertheless in their treatment of *E. hectorii*, they discuss *E. krulleanum* and make comments which suggest that it is a distinctive species, their merger being influenced by plants attributed to this species by others, and which came from the southern part of the range of *E. krulleanum*. Subsequent work by field botanists such as the late A.P. (Tony) Druce and others suggest that *E. krulleanum* is amply distinct from *E. hectorii*, and although Webb & Simpson (2001) follow Raven & Raven (1976) they note that the seeds of *E. krulleanum* readily distinguish it from the rest of the range of *E. hectorii*. While it is clear that New Zealand *Epilobium* are in need of a modern revision, and one that is based firmly on molecular data to help establish a sensible phylogenetic framework for such a revision, in the interim, it seems sensible to reinstate *E. krulleanum* as species distinct from *E. hectorii*.

## ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (4 September 2011). Description adapted from Cheeseman (1925), Raven & Raven (1976), Webb & Simpson (2001) and herbarium specimens.

## REFERENCES AND FURTHER READING

Cheeseman, T.F. 1925: *Manual of the New Zealand Flora*. Wellington, Government Printer

Raven, P.H.; Raven, T.E. 1976: The genus *Epilobium* in Australasia. New Zealand DSIR Bulletin 216. Wellington, Government Printer.

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: 285-309.

Webb, C.J.; Simpson, M.J.A. 2011: *Seeds of New Zealand Gymnosperms and Dicotyledons*. Christchurch, Manuka Press.

### **NZPCN FACT SHEET CITATION**

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### **MORE INFORMATION**

<https://www.nzpcn.org.nz/flora/species/epilobium-krulleanum/>