Epilobium tenuipes

COMMON NAME
willowherb

SYNONYMS
Epilobium confertifolium var. tenuipes (Hook.f.) Hook.f.; Epilobium nanum Colenso; Epilobium alsinoides subsp. tenuipes (Hook.f.) Raven et Engelhorn

FAMILY
Onagraceae

AUTHORITY
Epilobium tenuipes Hook.f.

FLORA CATEGORY
Vascular – Native

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

STRUCTURAL CLASS
Herbs - Dicotyledons other than Composites

NVS CODE
EPITNU

CHROMOSOME NUMBER
2n = 36

Desert road, January. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

Mount Ruapehu. Photographer: Jeremy R. Rolfe, Date taken: 08/02/2012, Licence: CC BY.

CURRENT CONSERVATION STATUS
2017 | Not Threatened

PREVIOUS CONSERVATION STATUSES
2012 | Not Threatened
2009 | Not Threatened
2004 | Not Threatened

BRIEF DESCRIPTION
Perennial herb, often with a sprawing habit, much branched from the base, stems shortly erect. Internodes with broad strigulose lines of hairs, pedicels densely strigulose all round and glabrous capsules and sepals (except for the base of capsule). Leaves narrowly eliptic or linear.

DISTRIBUTION
Endemic. New Zealand: North (Central and Southern North Island), South Island (throughout), mostly east of the main axial ranges.

HABITAT
Drier montane to mid-alpine in tussock grassland, shrubland (especially grey scrub), on rubble slopes and slip scars in subalpine scrub. The species very seldom strays west into the wetter mountains of the South Island due to its preference for drier habitats.

DETAILED DESCRIPTION

Erect open, creeping perennial herb 10-120 mm tall, base usually bearing sparse leafy stolons otherwise much branched; plants with broad strigulose lines decurrent from petiole margins, or strigulose all round near stem base, hairs appressed, occasionally erect. Leaves on petioles 1-2 mm long, opposite, alternate in the inflorescence, dull bluish-green, reddish green to bronze green, the lateral veins not prominent, 0-4 on each side of the midrib; lamina 5-10 x 1-3 mm, narrowly elliptic to linear, apex acute base attenuate, margins serrulate (rarely entire), with 0-4 teeth on each side. Inflorescence erect, the flowers scattered down the stem. Flowers erect. Ovaries 6-15 mm long, glabrous (or with broad strigulose lines of hairs running up sutures), on pedicels 3-27 mm long, these densely strigulose all around (pubescence extending to base of capsule thence stopping abruptly, very rarely with a few minute hairs on abaxial floral tube). Floral tube 0.5-1.5 mm deep, 0.7-2.2. mm diameter, glabrous or strigulose externally. Sepals 2.0-4.5 x 0.8-1.5 mm, not keeled, glabrous. Petals 2.8-3.0 x 1.8-2.2 mm, notch 0.3-0.7 mm deep; white. Anthers 0.4-0.9 x 0.25-0.5 mm, cream or yellow; filaments white, those of longer stamens 1-2 mm long, those of shorter stamens 0.5-1.5 mm long, the anthers of the longer stamens dehiscing first and shedding pollen directly on to the stigma after the flower opens. Styles 1.2-1.8 mm high, white; stigma 1.0-2.0 x 0.3-1.0 mm, white, clavate, surrounded by anthers of at least the longer and usually both sets of stamens at anthesis. Capsule 15-25 mm long, on greaty elongated pedicels 20-100 mm long (usually held well above subtending foliage); blue-green or reddish, glabrous to finely puberulent. Seeds 0.8-1.1 x 0.3-0.5 mm, pale orange-brown to orange, obovoid or narrowly obovoid, testa finely reticulate, apex distinctly, though narrowly, truncately beaked; coma 5-7 mm long, white caducous.

SIMILAR TAXA

As Raven & Raven (1976) argued, E. tenuipes, E. atriplicifolium and E. alsinoides are closely allied. E. alsinoides is separated from E. tenuipes by the ovate rather than narrowly elliptic or linear leaves, which are typically shorter than the internodes they subtend. In Epilobium tenuipes the mature capsules are usually conspicuously elevated above the leafy stems while they are much less so in E. alsinoides. The capsules and sepals of E. alsinoides are covered in fine pubescence, while those of A. tenuipes are generally glabrous, except for near the base of the capsule and an occasional patch further up. E. atriplicifolium differs from E. tenuipes by having finely reticulate-papillate rather than finely reticulate seeds, and pedicels which elongate to 10-90 mm (usually 10-40 mm long) long in fruiting specimens (10-80 mm but usually 20-80 mm in E. alsinoides). The leaves of E. atriplicifolium can have hairs extending onto their margins, while those of E. tenuipes never do. Epilobium elegans was merged with E. tenuipes (as E. alsinoides subsp. tenuipes) by Raven & Raven (1976) it differs from E. tenuipes by its longer (10-20 mm cf. 5-10 mm in E. tenuipes), slightly broader (2-4 mm cf. 1-3 mm in E. tenuipes) leaves, larger flowers (up to 8 mm diameter in E. elegans, up to 4 mm diameter in E. tenuipes), glabrous rather glabrous to finely puberulent longer capsules (20-30 mm cf. 15-25 mm long in E. tenuipes) and consistently smooth rather smooth or minutely reticulate seeds

FLOWERING

November - March

FRUITING

January - May

LIFE CYCLE

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

PROPAGATION TECHNIQUE

Easily grown from fresh seed and rooted pieces. Dislikes humidity and prone to powdery mildew in humid climates. Inclined to be weedy.

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

TAXONOMIC NOTES

Raven & Raven (1976) adopted a very conservative treatment for New Zealand *Epilobium*. In that treatment they recognised *Epilobium atriplicifolium* and *E. tenuipes* as subspecies of *E. alsinoides*. They also included with *E. alsinoides* subsp. *atriplicifolium*, *E. cockayneanum* (treated as a species here) and within subsp. *tenuipes* they merged *E. elegans* (also accepted at species rank here). Raven & Raven (1976) argued for subspecies rank and species merger on the basis of what they saw as intergrading forms between *E. atriplicifolium*, *E. cockayneanum*, *E. elegans* and *E. tenuipes* in the South Island. They did note that intergrading was not evident in the North Island, where the "major entites...are sharply distinct" but they suggested that this had to do with the effectively autogamous breeding system of these taxa, and while they accepted that intergrading forms occurred within the most "highly disturbed vegetational formation in New Zealand" (i.e. tussock grasslands) they nevertheless felt justified in their highly conservative treatment. Subsequently field botanists following the views of the late Tony Druce have continued to recognise as species *E. atriplicifolium*, *E. cockayneanum*, *E. elegans* and *E. tenuipes*. For want of a thorough, DNA-based revision of New Zealand *Epilobium*, for now at least it seems preferrable to follow Druce (1993) rather than Raven & Raven (1976) whose treatment of *Epilobium*, whilst understandable for its time, seems inconsistent.

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (22 October 2012). Description adapted from Raven & Raven (1976).

REFERENCES AND FURTHER READING

Druce, A.P. 1993: Indigenous vascular plants of New Zealand. Ninth Revision. Unpublished Checklist held at Landcare Research, Lincoln, New Zealand.
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
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NZPCN FACT SHEET CITATION

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MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/epilobium-tenuipes/