

Epilobium billardioreanum

COMMON NAME

willowherb

SYNONYMS

Epilobium billardioreanum (Ser.) DC. subsp. *billardioreanum*

FAMILY

Onagraceae

AUTHORITY

Epilobium billardioreanum (Ser.) DC.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

NVS CODE

EPIBIL

CHROMOSOME NUMBER

2n = 36

CURRENT CONSERVATION STATUS

2017 | Not Threatened | Qualifiers: SO

PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

BRIEF DESCRIPTION

A distinctly coastal species, generally found in sandy ground, with a decumbent habit, narrow ovate to ovate leaves with fine teeth, and flowering stems erect with a dense covering of white grey striglose hairs on the upper stems, pedicels, capsule and sepals.

DISTRIBUTION

Indigenous. New Zealand: North Island, South Island, Stewart Island/Rakiura, Chatham Islands. Also Australia (New South Wales, Victoria, South Australia and Tasmania).

HABITAT

Coastal. Usually on sparsely vegetated damp sand flats, or sandy ground bordering slow flowing streams, lagoons, ponds and lake margins. Often found in association with oioi (*Apodasmia similis*), wiwi (*Ficinia nodosa*) and *Juncus* spp. On the Chatham Islands, *E. billardierianum* is occasionally found inland growing on sandy ground in seasonally damp ground or around permanent water bodies.



Chatham Islands. Photographer: John Sawyer, Licence: CC BY-NC.



Chatham Islands. Photographer: John Sawyer, Licence: CC BY-NC.

WETLAND PLANT INDICATOR STATUS RATING

FACW: Facultative Wetland

Usually is a hydrophyte but occasionally found in uplands (non-wetlands).

DETAILED DESCRIPTION

Decumbent, prostrate, widely spreading, sparingly to well-branched perennial herb forming rather open, ± circular patches up to 1 m diameter, and up to 0.95 m tall (where plants have pushed up through surrounding vegetation), with flowering branches ± weakly ascendent. **Branch stems** ± glabrescent to weakly strigulose, branch bases ± woody, and often conspicuously exfoliating in well established specimens. **Leaves** mostly opposite alternate in and near the inflorescence, or alternate in the upper half, subsessile, yellow-green, green, often red-tinged, glabrous and shining the lateral veins visible to prominent, usually 3–5 on each side of the midrib; lamina 5.0–40.0 × 6.0–20.0 mm, narrowly ovate to ovate, base rounded to truncate, apex obtuse, margins densely and evenly serrulate, bearing 16–40 teeth on each side. **Inflorescence** on ascending branches, ± erect, densely grey-strigulose with glandular and eglandular hairs absent. **Flowers** erect. **Ovaries** densely grey-strigulose erect hairs, 10–30 mm long, on a pedicel 2–16 mm long. **Floral tube** 0.6–2.1 mm deep, 1.4–2.8 mm diameter, often bearing a conspicuous ring of long hairs within. **Sepals** 2.5–7.8 × 0.9–2.1 mm, keeled, strigulose. **Petals** 3.7–7.0 × 3.0–5.0 mm, the notch 1.0–1.8 mm deep, white flushing rose-purple after fertilisation. **Stamen filaments** white of two types, long 1.5–2.4 mm long and short 0.8–1.4 mm. **Anthers** cream, 0.5–1.0 × 0.3–0.65 mm. **Style** 1.1–2.0 mm long, white. **Stigma** 1.5–4.0 × 0.9–1.5 mm, white, clavate, surrounded by anthers at anthesis. **Capsule** 30–75 mm long, densely strigulose; pedicel 6–12 mm long. **Seeds** 0.9–1.1 × 0.3–0.4 mm, brown, reticulate-mammillate to reticulate-papillose, obovoid, without a chalazal callus, apex shortly beaked; coma 7.0–10.5 mm long, white, breaking off readily.

SIMILAR TAXA

Easily distinguished from other New Zealand epilobia by its ecological preference for damp sandy ground in coastal habitats, large size, stoloniferous, decumbent growth habit with only weakly ascendent, branch tips, erect inflorescences, glabrescent stems, yellow-green, green to red-tinged, glabrous, narrowly ovate to ovate leaves with rounded to truncate bases and obtuse apices and whose leaf margins are densely and evenly serrulate, bearing 16–40 teeth either side, and by the densely grey-strigulose (glandular and glandular hairs absent) inflorescences and capsules, and white flowers (which are only faintly rose-tinged after fertilisation). The species is superficially similar to *E. rotundifolium* as both have similar leaf shape and growth habit, but the teeth on the leaves of *E. billardierianum* are much finer than those of *E. rotundifolium*, the flowers on *E. billardierianum* are significantly larger, and the dense covering of hair on *E. billardierianum* is more obviously white gray in colour. In New Zealand at least *Epilobium billardierianum* has no similarity whatsoever to the strictly erect, much-branched, grey-coloured, *E. cinereum* (see Taxonomic Notes under *E. cinereum*) with which it sometimes grows. Both species are amply distinct from each other, and as far as is known do not hybridise with each other in the wild.

FLOWERING

October–March

FLOWER COLOURS

White

FRUITING

December–July

PROPAGATION TECHNIQUE

Easily grown from rooted pieces and fresh seed. Does best planted in full sun in a damp sandy soil. Inclined to be weedy and probably best left for restoration plantings into dune field rather than general cultivation.

SUBSTRATE

Sand

ETYMOLOGY

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

billardiereum: Named after Jacques Houttou de Labillardiere (1755-1834), 19th century French botanist who described several New Zealand plants

NOTES ON TAXONOMY

Raven & Raven (1976) prefer to treat *Epilobium billardierianum* as *E. billardierianum* subsp. *billardierianum*, and *E. cinerium* as *E. billardierianum* subsp. *cinereum*. However, irrespective of their comments for Australia, it is clear that in New Zealand *E. cinereum* is a widespread, morphologically stable unit that is only occasionally seen sympatric (and even syntopic) with the ecologically and morphologically distinct *E. billardierianum*. Furthermore, hybrids between both subspecies are as yet unknown from New Zealand, although Raven & Raven (1976) suggest that they are frequent in Australia. From a New Zealand perspective it is difficult to accept such morphologically distinct species as subspecies because of their reported behavior in Australia. Also, as with any *Epilobium* given an opportunity, hybridism is likely to happen, even with distinct relatives, as it is the main driver for speciation in the Australasian representatives of the genus. In this regard Raven & Raven (1976) are inconsistent, accepted at species rank other epilobia, which following their treatment of *E. billardierianum* should also be regarded as subspecies, or even merged.

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange 28 August 2011. Description prepared by P.J. de Lange (28 August 2011) adapted from Raven & Raven (1976) and Webb & Simpson (2001).

REFERENCES AND FURTHER READING

Raven PH, Raven TE. 1976. The genus *Epilobium* in Australasia. *New Zealand DSIR Bulletin 216*. Government Printer, Wellington, NZ. 321 p.

Webb CJ, Simpson MJA. 2001. Seeds of New Zealand Gymnosperms and Dicotyledons. Manuka Press, Christchurch. 428 p.

NZPCN FACT SHEET CITATION

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

MORE INFORMATION

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