

Dysphania pusilla

COMMON NAMES

pygmy goosefoot

SYNONYMS

Chenopodium pusillum Hook.f.; *Dysphania pusilla* (Hook.f.) Paul G.Wilson et K.A.Sheph. nom., superfl.

FAMILY

Amaranthaceae

AUTHORITY

Dysphania pusilla (Hook.f.) Mosyakin et Clemants

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Indeterminate

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Endangered

PREVIOUS CONSERVATION STATUSES

2009 | Extinct

2004 | Data Deficient

DISTRIBUTION

Endemic. New Zealand: North Island (Formerly recorded at Lake Taupo and Wairarapa). South Island (rediscovered 2015 in eastern Molesworth Station and the Ruataniwha wetlands (Clayton-Greene et al. 2015).

HABITAT

Open or sparsely-vegetated ground such as clay and salt plans, dried out river and lake beds. Also collected from cultivated land and railway yards.

DETAILED DESCRIPTION

Annual, cushion-forming, yellow-green, prostrate herb with all parts finely glandular hairy. **Leaves** suborbicular (nearly circular in profile), broadly ovate to ovate-oblong, margins entire, or sinuate (wavy) sometimes deeply lobed. **Flowers** minute, greenish-yellow, in dense axillary clusters (glomerules), perianth (united floral envelopes) divided into (3)–4–(5) segments. **Stamen** 1–(2). **Seed** 0.5–0.8 mm diameter, dark red brown, aligned vertical in perianth.

SIMILAR TAXA

Dysphania pusilla is very similar to some of the small forms of the introduced Australian *D. pumilio*. The key differences are that *D. pumilio* usually has (4)–5 perianth segments, slightly larger seeds, and more deeply divided leaves.

FLOWERING

November–March



Ruataniwha Wetlands. Photographer: Melissa Hutchison, Date taken: 27/01/2022, Licence: CC BY-NC.



Ruataniwha Wetlands. Photographer: Melissa Hutchison, Date taken: 27/01/2022, Licence: CC BY-NC.

FLOWER COLOURS

Green, Yellow

FRUITING

December–May

LIFE CYCLE

Annual.

PROPAGATION TECHNIQUE

Easily grown from seed. A short-lived annual that self-establishes in sites where it has been grown.

THREATS

Formerly assessed as 'Taxonomically Indeterminate – Extinct' (de Lange et al. 2013) but, following its rediscovery some 65 years after it was last seen (Clayton-Greene et al. 2016), the species is now listed as 'Threatened – Nationally Endangered' (de Lange et al. 2018). For more information see below.

ETYMOLOGY

pusilla: Small

TAXONOMIC NOTES

On the basis of molecular phylogenetic evidence the genus *Dysphania* R.Br. has been reinstated (see Mosyakin & Clemants 2002; Shepherd & Wilson 2008, 2009). The genus is distinguished from *Chenopodium* s.s. by their minute flowers which occur in compact, cymose clusters and by the presence of subsessile glands or simple and acuminate, multicellular, glandular hairs as well as DNA evidence (see summary by Shepherd & Wilson 2008). *Dysphania pusilla* presents somewhat of an enigma in the New Zealand Flora. Herbarium records suggest it was never common in the North Island, where it was collected as a 'weed' in Māori gardens. Historical South Island records tend to correlate to old sheep runs with one 1950s record from a railway yard in Christchurch. The species was not then seen again until the summer of 2014–2015 when it was discovered in a remote portion of the upper Clarence River, and in parts of the McKenzie Basin (Clayton-Greene 2015). No one is sure why it vanished for some 65 years, only to reappear in several locations, sometimes as 1000s of plants. The habitats occupied are not singular but rather widespread, mostly weedy, often heavily grazed, though one is within a fenced wetland system set up for threatened wading birds (where water levels are artificially controlled). Although many plants were seen in 2015/2016, the area of occupancy is small, and the species is potentially threatened from competition by weeds if grazing pressure is reduced. For this reason *Dysphania pusilla*, once regarded as 'Extinct', has been assessed as 'Nationally Endangered' (de Lange et al. 2018).

One pressing issue remains. Is *Dysphania pusilla* truly indigenous / endemic? Preliminary DNA data based on one marker (nrDNA ITS) places this species with *D. pumilio*. Further study of the relationship of *Dysphania pusilla* with *D. pumilio*—a very variable species in Australia—is needed. It may well be that *Dysphania pusilla* is also in Australia, and that it may even be an early introduction to New Zealand.

ATTRIBUTION

Fact Sheet prepared and updated for NZPCN by P.J. de Lange (30 August 2018)

REFERENCES AND FURTHER READING

- Clayton-Greene, J.; Courtney, S.; Rebergen, A.; Head, N. 2015: The rediscovery of the presumed extinct *Dysphania pusilla*. *Trilepidea* 139: 1-3.
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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/dysphania-pusilla/>

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