

# Dysphania pusilla

## COMMON NAMES

pygmy goosefoot

## BIOSTATUS

Native

## CURRENT CONSERVATION STATUS

2023 | Threatened – Nationally Endangered | Qualifiers: Sp, DPR, DPT, EF

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## CATEGORY

Vascular

## STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

## FLOWER COLOURS

Green, Yellow

## 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.

## 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.

## 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.

## GENUS

Dysphania

## FAMILY

Amaranthaceae

## AUTHORITY

*Dysphania pusilla* (Hook.f.) Mosyakin et Clemants

## SYNONYMS

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



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.

## 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 sessile 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.

## ENDEMIC TAXON

Indeterminate

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## FLOWERING

November–March

## FRUITING

December–May

## LIFE CYCLE AND DISPERSAL

Annual.

## PROPAGATION TECHNIQUE

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

## ETYMOLOGY

**pusilla:** Small

## PREVIOUS CONSERVATION STATUSES

2017 | Threatened – Nationally Endangered

2009 | Extinct

2004 | Data Deficient

[Jump to current conservation status](#)

## 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.
- de Lange PJ, Rolfe JR, Barkla JW, Courtney SP, Champion PD, Perrie LR, Beadel SM, Ford KA, Breitwieser I, Schönberger I, Hindmarsh-Walls R, Heenan PB, Ladley K. 2018. Conservation status of New Zealand indigenous vascular plants, 2017. *New Zealand Threat Classification Series* 22. Department of Conservation, Wellington, NZ. 82 p. <https://www.doc.govt.nz/globalassets/documents/science-and-technical/nztcs22entire.pdf>.
- de Lange PJ, Rolfe JR, Champion PD, Courtney SP, Heenan PB, Barkla JW, Cameron EK, Norton DA, Hitchmough RA. 2013. Conservation status of New Zealand indigenous vascular plants, 2012. *New Zealand Threat Classification Series* 3. Department of Conservation, Wellington, NZ. 70 p. <https://www.doc.govt.nz/globalassets/documents/science-and-technical/nztcs3entire.pdf>.
- Mosyakin SL, Clemants SE. 2002: New nomenclatural combinations in *Dysphania* R.Br. (Chenopodiaceae): taxa occurring in North America. *Ukrainia Botanical Journal* 59: 380–385. [https://www.researchgate.net/publication/272417640\\_New\\_nomenclatural\\_combinations\\_in\\_Dysphania\\_RBr\\_Chenopodiaceae\\_Taxa\\_occurring\\_in\\_North\\_America](https://www.researchgate.net/publication/272417640_New_nomenclatural_combinations_in_Dysphania_RBr_Chenopodiaceae_Taxa_occurring_in_North_America).
- Shepherd KA, Wilson PG. 2008. New combinations in the genus *Dysphania* (Chenopodiaceae). *Nuytsia* 18: 267–272. <https://doi.org/10.58828/nuy00534>.
- Shepherd KA, Wilson PG. 2009. Clarification of recent combinations in the genus *Dysphania* (Chenopodiaceae) *Nuytsia* 19: 198–199. <https://doi.org/10.58828/nuy00567>.

## ATTRIBUTION

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

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## MORE INFORMATION

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

## PDF DATE

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