

Chenopodium detestans

COMMON NAMES

New Zealand fish-guts plant

BIOSTATUS

Native

CATEGORY

Vascular

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

FLOWER COLOURS

Green, Grey

DETAILED DESCRIPTION

Annual to short-lived perennial prostrate, grey-green to reddish-grey, fleshy herb forming patches up to 800 mm diameter, and arising from a stout central, deeply descending tap root. All parts strongly fetid, smelling of rotten fish. Branches 2-8, grey-green, with stems and emergent leaves often suffused with red, rather stiff, margins often distorted by fungus pustules. Emergent foliage grey-farinose, maturing grey-green or reddish-grey, rather fleshy; leaves rhombic, or rhomboid-ovate, usually entire except for the basal stem leaves which often possess 1 pair of teeth, apex acute. Flowers grey-green in dense axillary to terminal spike-like clusters, stigma white. Perianth segments 4-5, 0.5-1.0 mm long, divided almost to base, obtuse, scarcely accrescent, incompletely investing fruits. Stamens 1-2 sulphur yellow, not fused at base. Seed, circular, 1-1.2 mm diameter, dark purple-brown to black brown, minutely punctate, margins rounded (obtuse), aligned horizontally in perianth.

SIMILAR TAXA

The introduced *Chenopodium vulvaria* (fish-guts plant) is a very similar, equally smelly plant, which can only be reliably distinguished from *C. detestans* by its 5 rather than 1-2 stamens, and sharp (acute) rather than rounded seed margins.

DISTRIBUTION

Indigenous to New Zealand, South Island only.

Historically the species ranged from Canterbury to Otago. Recent (post 1980) collections have only been made from Lake Lyndon (first discovered by T. Kirk in 1877) and the upper Waitaki Valley. In those days this area was extensively farmed for sheep and cattle, and while this was the case, *C. detestans* was common on the shores of Lake Lyndon, in sites frequented by these animals. The species has also been found in New South Wales, Australia, where it may have naturalised.

HABITAT

Open or sparsely-vegetated ground such as clay and salt plans, dried out river and lake beds, and ephemeral tarns.

CURRENT CONSERVATION STATUS

2023 | Threatened – Nationally Critical | Qualifiers: DPT, EF, TO

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Castle Hill Basin. Photographer: Jane Gosden, Date taken: 02/02/2025, Licence: CC BY-NC-SA.



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THREATS

As far as is known *C. detestans* has declined mainly because of a loss of suitable open, sparsely-vegetated habitats. This seems to have been the result of the spread of introduced pasture grasses and weeds, and changes in land use, especially stocking levels. The only recent collections have come from well-stocked sheep farms in the upper Waitaki Valley, where it grows on clay and salt pans. Possibly because of its foul smell the species does not seem to be palatable to livestock, so livestock may help reduce competition from other taller, more palatable plants.

DETAILED TAXONOMY

FAMILY

Amaranthaceae

AUTHORITY

Chenopodium detestans Kirk

SYNONYMS

None

ENDEMIC TAXON

Indeterminate

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

ECOLOGY

FLOWERING

September – March

FRUITING

December - May

LIFE CYCLE AND DISPERSAL

Seeds are dispersed by wind and water (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

As far as is known no one has successfully grown this species. There have been a few attempts to transplant wild plants and strike cuttings but these failed because the plants/cuttings were given too much water. Seed should germinate easily.

OTHER INFORMATION

ETYMOLOGY

chenopodium: From the Greek chen 'goose' and pous 'foot', referring to the shape of the leaves

NVS CODE

CHEDET

PREVIOUS CONSERVATION STATUSES

2017 | Threatened – Nationally Critical | Qualifiers: DP, EF, TO

2012 | Threatened – Nationally Critical | Qualifiers: DP, EF, TO

2009 | Threatened – Nationally Critical | Qualifiers: TO, EF, DP

2004 | Data Deficient

[Jump to current conservation status](#)

REGIONAL CONSERVATION STATUSES

Otago: 2024 | Regionally Extirpated | Qualifiers: HR

REFERENCING AND CITATIONS

REFERENCES AND FURTHER READING

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.

ATTRIBUTION

Description based on live plants and herbarium specimens

NZPCN FACT SHEET CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Chenopodium detestans* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network.

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

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/chenopodium-detestans/>

PDF DATE

26 March 2025