Geranium retrorsum

COMMON NAMES
turnip-rooted geranium

BIOSTATUS
Native – Endemic taxon

CURRENT CONSERVATION STATUS
2023 | Threatened – Nationally Vulnerable | Qualifiers: DPR, DPS, DPT, SO
Jump to previous conservation statuses

CATEGORY
Vascular

STRUCTURAL CLASS
Herbs - Dicotyledons other than Composites

FLOWER COLOURS
Red/Pink, White



Geranium retrorsum. Photographer: Bec Stanley, Licence: CC BY-SA.



Mou Tapu Island, Lake Wanaka. Photographer: John Barkla, Licence: CC BY.

DETAILED DESCRIPTION
Perennial herb 120–390 mm tall. **Rootstock** 4.9–15.7 mm diam., without fusiform roots. **Stem** erect to ascending, with retrorse, appressed, eglandular hairs 0.2–0.9 mm long. **Basal leaves** in a ± deciduous rosette; lamina 0.99–4.08 × 1.6–5.3 cm, polygonal in outline, cordate, palmatifid (divided for 0.56–0.84 of its length), pilose, with appressed, eglandular hairs; segments 5–7, obtriangular, 1.2–5.6 mm at the base, 3–9-lobed in distal half; petioles to 230 mm long, with retrorse, appressed, eglandular hairs 0.2–0.9 mm long; stipules 2.0–6.5 × 0.5–1.5 mm, with eglandular hairs on abaxial surface and on the margin, glabrous adaxially. **Inflorescence** 2-flowered cymules, solitary; peduncles (6)–13–31–(84) mm long, with retrorse, appressed, eglandular hairs 0.2–0.6 mm long; bracteoles 1.4–4.2 × 0.3–0.9 mm, linear-lanceolate, with eglandular hairs on abaxial surface and on the margin, glabrous adaxially; pedicels 6–37 mm long, with retrorse, appressed, eglandular hairs 0.2–0.6 mm long; pedicel and peduncle together usually overtopping the subtending leaf. **Sepals** (3.2)–4.9–5.5–(6.3) × 1.5–3.5 mm, lanceolate, with mucro (0.2)–0.4–0.6–(0.9) mm long, with scarious margins 0.1–0.2 mm wide, with antrorse, ± appressed, eglandular hairs 0.1-1.1 mm long on the abaxial side, glabrous adaxially. **Petals** (2.9)–3.5–5.3–(9.2) × 1.4–4.5 mm, entire or slightly notched, without claw, glabrous on both sides, ciliate on the basal margin, dark white, pink to dark purple. **Filaments** 2.2–4.7 mm long, whitish, glabrous on both sides, ciliate on the basal margin, with hairs up to 0.10–0.15 mm long; anthers 0.4–1.0 × 0.2–0.6 mm, yellowish. **Nectaries** glabrous. **Gynoecium** 2.0–4.5 mm long, yellowish. **Fruit** 11–18 mm long; mericarps 2.5–3.5 × 1.3–1.7 mm, smooth, with erect-patent, eglandular hairs 0.3–1.2 mm long, brownish; rostrum 7.8–13.2 mm long, without a narrowed apex, with erect-patent, eglandular hairs 0.1–0.7 mm long; stigmatic remains (0.6)–0.9–1.1–(1.3) mm long, with 5 hairy lobes. **Seeds** 1.5–2.3 × 1–1.4 mm, finely reticulate.

SIMILAR TAXA
Most frequently confused with *G. solanderi* Carolin from which it differs by the long hairs of the petiole and pedicel being distinctively retrorse and appressed, rather than straight, patent or curved and retrorse but never appressed, and by the dorsal alveolae of the seed being mostly 4–6- rather than 5–6-sided, and up to c. 0.1 mm rather than >0.1 mm diameter. The rootstock of *G. retrorsum* is often turnip-shaped, whereas that of *G. solanderi* is more like a long tapering parsnip or carrot.

DISTRIBUTION
Indigenous. North and South Islands including many northern offshore islands.

HABITAT
Coastal to lower montane (0–400 m a.s.l.). Formerly widespread in short tussock grasslands, on lava fields, clay pans and on rocky coastal headlands.

THREATS
Geranium retrorsum is now very uncommon throughout most of its North Island range, though it is still common in parts of the eastern South Island (de Lange *et al.* 2010). In the North Island it is now mainly found on northern offshore islands. It appears to be threatened by browsing animals such as rabbits, which avidly dig up plants for the roots. The open habitats it prefers are also now largely dominated by taller growing exotic weeds. It is still said to be common in Australia.

GENUS
Geranium

FAMILY
Geraniaceae

AUTHORITY
Geranium retrorsum DC.

SYNONYMS
None

TAXONOMIC NOTES
In New Zealand *Geranium retrorsum* comprises three distinct races - the typical form (i.e. matching the type) is the one described here, which is undeniably indigenous. Two other races occur, one confined to weedy sites around Canterbury (see Webb & Simpson 2001), and another found so far only around Oakley Creek, Auckland (Mitchell *et al.* 2009) - and possibly also Tawa, Wellington. The taxonomic status of these latter two races, both of which probably also occur in Australia, needs resolution, but for now they are regarded as indigenous.

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

FLOWERING
September–March

FRUITING
October–July

LIFE CYCLE AND DISPERSAL
Seed dispersed by wind, ballistic projection and possibly attachment (Thorsen et al., 2009).

PROPAGATION TECHNIQUE
Easily grown from fresh seed but inclined to be short-lived. Does not transplant well. Prefers a free-draining, sunny situation.

ETYMOLOGY
geranium: From the Greek geranos ‘crane’, the fruit of the plant resembling the head and beak of this bird, hence the common name cranesbill.
retrorsum: Bent backward or downward

NVS CODE
GERRET

CHROMOSOME NUMBER
2n = 52

PREVIOUS CONSERVATION STATUSES
2017 | Threatened – Nationally Vulnerable | Qualifiers: DP, SO
2012 | Threatened – Nationally Vulnerable | Qualifiers: DP, SO
2009 | Threatened – Nationally Vulnerable | Qualifiers: DP, SO
2004 | Not Threatened
Jump to current conservation status

REGIONAL CONSERVATION STATUSES
Auckland: 2025 | Regionally Threatened – Regionally Vulnerable | Qualifiers: DPR, DPS, DPT, NStr, PF, RR, SO, Sp, NS Help
The regional threat classification system leverages off the national assessments in the NZTCS, providing information relevant for the regional context. Auckland conservation status information is sourced from the "Conservation status of vascular plant species in Tāmaki Makaurau / Auckland" Simpkins E et al. (2025) report.
Otago: 2025 | Regionally Threatened – Regionally Critical | Qualifiers: DPR, DPS, DPT, NR, Sp Help
The regional threat classification system leverages off the national assessments in the NZTCS, providing information relevant for the regional context. Otago conservation status information is sourced from the "Conservation Status of Indigenous Vascular Plants in Otago, 2025" Jarvie S et al. (2025) report.

REFERENCES AND FURTHER READING
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ATTRIBUTION
Fact Sheet prepared by P.J. de Lange (14 April 2008). Description adapted from Aedo *et al.* (2005), supplemented with observations based on fresh and cultivated specimens.

NZPCN FACT SHEET CITATION
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MORE INFORMATION
https://www.nzpcn.org.nz/flora/species/geranium-retrorsum/

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