

Geranium retrorsum

COMMON NAME

turnip-rooted geranium

SYNONYMS

None

FAMILY

Geraniaceae

AUTHORITY

Geranium retrorsum DC.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

NVS CODE

GERRET

CHROMOSOME NUMBER

2n = 52

CURRENT CONSERVATION STATUS

2012 | Threatened – Nationally Vulnerable | Qualifiers: DP, SO

PREVIOUS CONSERVATION STATUSES

2009 | Threatened – Nationally Vulnerable | Qualifiers: DP, SO

2004 | Not Threatened

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.



Geranium retrorsum. Photographer: Bec Stanley



Radar station track, Cuvier Island. Photographer: Gillian Crowcroft

FEATURES

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 distinctively retrorse, appressed, rather than straight, patent or curved and retrorse but never appressed, and by the dorsal alveolae of the seed 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; that of *G. solanderi* is more like a long tapering parsnip or carrot.

FLOWERING

September - March

FLOWER COLOURS

Red/Pink, White

FRUITING

October - July

LIFE CYCLE

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.

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 weeds. It is still said to be common in Australia.

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

WHERE TO BUY

Not commercially available.

TAXONOMIC NOTES

In New Zealand *Geranium retrorsum* comprises three distinct races, the typical form (i.e. matching the type) of which is the one described here, and 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.

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.

REFERENCES AND FURTHER READING

- Aedo, C., O. Fiz, M. L. Alarcón, C. Navarro, and J. J. Aldasoro. 2005. Taxonomic revision of *Geranium* sect. *Dissecta* (Geraniaceae). *Systematic Botany* 30: 533-558.
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- Mitchell, A. D., P. B. Heenan, and A. M. Paterson. 2009. Phylogenetic relationships of *Geranium* species indigenous to New Zealand. *New Zealand Journal of Botany* 47: 21-31.
- 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.
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NZPCN FACT SHEET CITATION

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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/geranium-retrorsum/>