

Gentianella calcis subsp. calcis

COMMON NAME

Awahokomo gentian

SYNONYMS

None

FAMILY

Gentianaceae

AUTHORITY

Gentianella calcis Glenny et Molloy subsp. *calcis*

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

CHROMOSOME NUMBER

2n = 36

CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Critical | Qualifiers: CD, OL

PREVIOUS CONSERVATION STATUSES

2012 | Threatened – Nationally Critical | Qualifiers: CD, EF, OL

2009 | Threatened – Nationally Critical | Qualifiers: CD, EF, OL

2004 | Range Restricted

DISTRIBUTION

Endemic. South Island, two sites in the Waitaki Valley.

HABITAT

A limestone endemic confined to limestone bluffs, where it grows in rock joints, crevices, associated rendzina soils, limestone talus and associated colluvium. Usually in bare or sparsely vegetated sites.

DETAILED DESCRIPTION

Perennial tufted herb partially dying back to root-stock in winter. Rosette leaves without obvious petiole; linear 68-83 mm long, 2.6-4.1 mm wide, green to purple-green, strongly V-shaped in cross-section, apex acute, recurved; margins minutely toothed or smooth. Cauline leaves, linear, somewhat recurved, usually smaller than rosette leaves. Flowering stems, purple-black, 1-5 per plant. Pedicels 3.5-14 mm long, 0.8-1 mm diam. Flowers 9-28(-78) per plant, 15-18 mm long. Calyx green, tinted purple black, 7.5-14 mm long; lobes 4.6-10 mm long, 1.9-2.5 mm wide at base. Corolla 13.5-17 mm long, veins colourless; tube 3.4-5 mm long; lobes 10-12 mm long, 6.2-9 mm wide, margins toothed; nectary 0.9-1.6 mm from corolla base, V-shaped to pocket-like. Filaments 6.5-8.5 mm long from corolla base, 0.6-0.9 mm wide. Anthers 1.9-3.1 mm long, extrorse at anthesis. Ovules 9-35 per ovary. Ovary becoming bluish-purple after flowering. Capsules 13-17.5 mm.



Gentianella calcis subsp. *calcis* April.
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Awahokomo. Photographer: John Barkla,
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SIMILAR TAXA

Closely allied to *G. calcis* subsp. *manahune* Glenny et Molloy, *G. calcis* subsp. *waipara* Glenny et Molloy, and *G. calcis* subsp. *taiko* Glenny et Molloy, from all of which it differs by the longer and wider rosette leaves, while it differs from *G. calcis* subsp. *manahune* by its colourless rather than purple corolla veins.

FLOWERING

(March-) April (-June)

FLOWER COLOURS

White, Yellow

FRUITING

(April-) August (-November)

LIFE CYCLE

Seeds dispersed by ballistic projection, wind and water (Thorsen *et al.* 2009)

PROPAGATION TECHNIQUE

Difficult. Should not be removed from the wild.

THREATS

At serious risk of extinction from the spread of weeds such as *Festuca rubra*, *Pilosella officinarum* L., *Dactylis glomerata* L. and *Sedum acre* L., and because the population is so small natural disturbances caused by storms, slumping, rock and boulder fall. Previously regarded (as *Gentiana* aff. *astonii* (c) (CHR 519113; Awahokomo)) as Range Restricted in de Lange *et al.* (2004).

ETYMOLOGY

gentianella: Little *Gentiana* (named after Gentius, 6th century king of Illyria, who found the roots of the yellow gentian to have a healing effect on his malaria-stricken troops)

TAXONOMIC NOTES

Gentianella calcis is closely related to *G. astonii* (Petrie) T.N.Ho et S.W.Liu, from which it differs by the consistently longer (30-83 mm cf. 9-32 mm) leaves, which are usually folded, and by the recurved leaf apex.

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (October 2004). Description modified from Glenny (2004).

REFERENCES AND FURTHER READING

de Lange P. et al. 2004: Threatened and uncommon plants on New Zealand. *New Zealand Journal of Botany* 42: 45-76.

Glenny, D. 2004: A revision of the genus *Gentianella* in New Zealand. *New Zealand Journal of Botany* 42: 361-530.

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

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/gentianella-calcis-subsp-calcis/>