Chionochloa nivifera

COMMON NAME
Fiordland snow tussock

SYNONYMS
None (first described in 2004)

FAMILY
Poaceae

AUTHORITY
Chionochloa nivifera Connor et K.M.Lloyd

FLORA CATEGORY
Vascular – Native

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

STRUCTURAL CLASS
Grasses

NVS CODE
CHINIV

CHROMOSOME NUMBER
2n = 42

CURRENT CONSERVATION STATUS
2012 | At Risk – Naturally Uncommon | Qualifiers: RR

PREVIOUS CONSERVATION STATUSES
2009 | At Risk – Naturally Uncommon
2004 | Range Restricted

DISTRIBUTION
Endemic. New Zealand: South Island (south-eastern Fiordland)

HABITAT
Alpine, in short Chionochloa crassiuscula subsp. torta Connor grassland.
FEATURES
Short dark green snow tussock of densely aggregated, compressed, suberect to ± prostrate shoots from a sheath-covered old low-creeping prone stout stem, of 1-3 finely pointed leaves accumulating and weathering in situ. Leaf-sheath 30-100 mm, strongly keeled above, reddish purple below becoming stramineous, persistent, inter-rib hairs minute; margin usually somewhat wavy, short hairy above or not; apical tuft of hair 0.5-1.0 mm or absent. Ligule narrow, to 0.25 mm. Leaf-blade to 300 × 2 mm, prominently keeled below as in leaf-sheath, strongly compressed, becoming flat, 3–5 mm wide, thin and weak, persistent, abaxially glabrous except for prickle-teeth on keel towards long fine twisting apex, adaxially prickle-toothed on nerves, margin with long hairs below and prickle-teeth above or hairs absent. Culm to 350 mm, glabrous, compressed, < leaves; sheath heavily nerved and sometimes empurpled. Inflorescence 60–100 mm, laxly open, pulvinate, of 11-20 solitary spikelets on long glabrous drooping branches and pedicels, naked below, occasionally 1-2 hairs below spikelet. Spikelet 8-10 mm long, of 3–5 florets, with awns flexed inwards and intercrossing. Glumes unequal, glabrous except for occasional long hairs at base of upper glume, occasionally mucronate, < adjacent lemma lobes; lower to 5 mm, 3–5-nerved, upper to 7 mm, 7-nerved. Lemma 3–6 mm; hairs dense at margin and aside central nerve, scattered and fewer elsewhere though sometimes in all internerves, greater than or equal to sinus; lateral lobes 2–3.5 mm, triangular–acute, or awned to 1.5 mm, apex ciliate; central awn 4 mm flexed inwards from flat or slightly rotating column 0.50-0.75 mm, tip sometimes hooked. Palea 3.5-5.5 mm, ~ tip of lemma lobes, pointed or shallowly bifid, apex ciliate; keels long ciliate above glabrous below; flanks long hairy below. Callus 0.6-1.0 mm; hairs 2–3 mm. Rachilla 0.50-0.75 mm, glabrous. Lodicules 1.0 mm including hairs to 0.6 mm. Anthers 2.5 mm, empurpled. Ovary 0.75 mm; stigma-style 2.5 mm. Seeds 2.0-2.5 mm.

SIMILAR TAXA
Allied to Chionochloa macra Zotov and C. pallens Zotov. Both C. nivifera and C. pallens are distinguished from C. macra by the leaf-sheath which is keeled rather than rounded and either keeled or compressed leaf-blades. Chionochloa nivifera is distinguished from C. pallens by the strongly compressed, weak rather than keeled and tough leaf-blades, and by the glabrous, flexuous and drooping inflorescence branches. The inflorescence branches of C. pallens are hairy and erect.

FLOWERING
Unknown - insufficiently studied and collected

FRUITING
Unknown - insufficiently studied and collected

LIFE CYCLE
Florets are wind dispersed (Thorsen et al., 2009).

PROPAGATION TECHNIQUE
Difficult - except in cooler climates. It has been successfully cultivated in Dunedin and at Landcare Research Lincoln but proved impossible to maintain in Auckland. Dislikes drought and humidity.

THREATS
Range Restricted - known from only a few locations where it can be at times locally common. However, the total area it occupies is very small. There are no known threats and further, as a newly described species from a remote part of New Zealand, it is likely to prove more widespread as this part of the country becomes better explored.

ETYMOLOGY
chionochloa: Snow grass

ATTRIBUTION
Description adapted from Connor and Lloyd (2004).

REFERENCES AND FURTHER READING

MORE INFORMATION