Puccinellia walkeri

COMMON NAMES
Walker's saltgrass

BIOSTATUS
Native – Endemic taxon

CURRENT CONSERVATION STATUS
2023 | At Risk – Naturally Uncommon | Qualifiers: Sp, DPS, DPT
Jump to previous conservation statuses

CATEGORY
Vascular

STRUCTURAL CLASS
Grasses

DETAILED DESCRIPTION
Erect, bluish green or light green to pale brownish green, stiff, dense, very leafy tufts, 95–500 mm, with uppermost leaves usually overtopping culms; branching intravaginal. **Leaf-sheaths** straw-coloured to light greenish brown or grey-brown, sometimes purplish smooth, firmly membranous, finely nerved; ligule 0.6–3.0 mm, obtuse or truncate, or sometimes tapered at centre and acute, smooth, entire; leaf-blades 50–250 mm long, folded and then 5–10 mm wide, or sometimes almost flat, undersides smooth, upper shallowly ridged and sparsely scabrous on ridges, margins scabrous, tip smooth, ± firmly acute, sometimes subobtuse and ± apiculate. **Culms** smooth, usually enclosed by sheaths. **Panicle** 30–170 × 5–110 mm, initially overtopped by leaves usually expanding well above them at maturity, linear-lanceolate, erect, contracted, dense; branches stiff, erect, acute-angled and scabrous, spreading at maturity. **Spikelets** 3–9 mm, 2–5-flowered, bluish green or sometimes purplish. **Glumes** ± unequal, narrow-lanceolate to elliptic-oblong, subacute; lower glume 1.5–4.2 mm, 1–3-nerved; upper glume 2–5 mm, 3–5-nerved. **Lemma** 3–5 mm, 5–7-nerved, elliptic-oblong, apex subobtuse to obtuse, midnerve not excurrent, apex minutely ciliate-scabrous, otherwise with a few hairs on basal nerves and at base, sometimes with hairs on nerves to c. ½ way. **Palea** < or occasionally = lemma, keels scabrous in upper ½–[illegible], reaching only to palea-**Rachilla** 0.8–1.8 mm. **Anthers** 0.6–l.5 mm. **Seed** 1.5–2.6 × 0.4–0.8 mm.

SIMILAR TAXA
Distinguished from *P. antipoda* (Petrie) Allan et Jansen and *P. chathamica* (Cheeseman) Allan et Jansen by the usually more robust growth habit, larger panicles with scabrous, acute-angled branches which when mature overtop the leaves, and from *P. chathamica* by the chromosome number (2n = 35 in *P. walkeri*, 2n = 42 in *P. chathamica*, *P. antipoda* is as yet uncounted). Differentiating between *Puccinellia stricta* and *Puccinellia walkeri* (which sometime co-occur) can be difficult: the size of the lemma (3–5mm in *P. walkeri*, usually less or = 3 mm in *P. stricta*) is a good guide. The panicle of *P. stricta* also tends to open out post-flowering so that obvious branches are visible rather than remaining closely and erectly branched. The palea keel in *P. stricta* is scabrid but is ciliate in *P. walkeri* (though, this difference can be small).

DISTRIBUTION
Endemic. New Zealand: South (Cook Strait (Brothers Islands), thence from Banks Peninsula to Riverton) and Stewart Islands.

HABITAT
On small islets and rock stacks (especially near sea bird nests) and in salt meadow, salt marsh and on saline ground in estuaries; also on sandy and stony ground at high tide level.

THREATS
Naturally Uncommon, range-restricted, sparse endemic. Very little is known about its ecology, and at least some populations appear to be sterile. However no obvious threats are known and the species is abundant in the southern part of its range.

GENUS
Puccinellia

FAMILY
Poaceae

AUTHORITY
Puccinellia walkeri (Kirk) Allan

SYNONYMS
Atropis walkeri (Kirk) Cheeseman; Glyceria novae-zelandiae Petrie; Atropis novae-zealandiae (Petrie) Hack.; Puccinellia novae-zealandiae (Petrie) Allan et Jansen; Puccinellia walkeri (Kirk) Allan subsp. walkeri

TAXONOMIC NOTES
Edgar (1996) treated this species *P. chathamica* and *P. antipoda* as a subspecies of *P. walkeri*. Since that revision further research has elucidated that *P. chathamica* and *P. walkeri* have very different chromosome numbers and nrDNA ITS sequences. Although *P. antipoda* has not been available for study it would seem that subspecies rank is unjustified.

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

FLOWERING
October–December

FRUITING
November–January (seed is absent in some populations)

PROPAGATION TECHNIQUE
Easily grown from rooted pieces and fresh seed—when produced. Plants cultivated at the University of Auckland from several South Island locations proved to be pentaploid and did not produce viable seed.

ETYMOLOGY
puccinellia: After the italian botanist Benedetto Puccinelli (1808 - 1850).

MANAAKI WHENUA ONLINE INTERACTIVE KEY
Key to the grasses of New Zealand

NVS CODE
PUCWAL

CHROMOSOME NUMBER
2n = 35

PREVIOUS CONSERVATION STATUSES
2017 | At Risk – Naturally Uncommon | Qualifiers: DP, Sp
2012 | At Risk – Naturally Uncommon | Qualifiers: DP, Sp
2009 | At Risk – Naturally Uncommon
2004 | Range Restricted
Jump to current conservation status

REGIONAL CONSERVATION STATUSES
Otago: 2025 | Regionally Threatened – Regionally Critical | Qualifiers: CI, DPR, DPS, DPT, PF, RR, 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

Edgar E. 1996. *Puccinellia* Parl. (Gramineae: Poeae) in New Zealand. *New Zealand Journal of Botany 34*: 17–32.

ATTRIBUTION

Description modified from Edgar (1996).

MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/puccinellia-walkeri/

PDF DATE

08 June 2026