

Simplicia felix

BIOSTATUS

Native – Endemic taxon

CURRENT CONSERVATION STATUS

2023 | Threatened – Nationally Critical | Qualifiers: DPR, DPS, DPT, RR

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CATEGORY

Vascular

STRUCTURAL CLASS

Grasses

SIMPLIFIED DESCRIPTION

Feeble, inconspicuous mat-forming grass of shaded habitats. Plants rooting at nodes. Inflorescences inconspicuous, delicate; flowering branches scabrid, upper branches often tightly appressed to main stem, basal ones often reflexed and spreading. Spikelets one-flowered, bearing prominent scabrid lemma and much reduced, minute scale-like glumes.

FLOWER COLOURS

Green



Simplicia felix leaf base and ligule. Wairarapa. Photographer: Jeremy R. Rolfe, Date taken: 01/03/2014, Licence: CC BY.



Simplicia felix spikelet showing reduced glumes

DETAILED DESCRIPTION

Plants forming flaccid, diffuse, often much interconnected, sprawling patches up to 1 m across. **Culms** 0.25–0.65 m long, green to dark brown when fresh, wiry, initially decumbent, becoming ascendant with the apices weakly erect, culm internodes 5–8, elongated, glabrous; internodes longer than subtending leaf-sheaths. **Culm-nodes** conspicuously swollen when fresh, dark green-brown to brown-black 0.15–0.25 mm long, rooting freely on contact with ground. **Basal leaf-sheaths** dull dark brown, membranous, strongly ribbed, usually abaxially pubescent (sometimes glabrous) on ribs, hairs 0.10–0.15 mm long, patent to retrorse; mid stem and upper leaf-sheaths pale-green to green, membranous, strongly ribbed, glabrous (rarely abaxially ribs finely pubescent toward sheath apex). **Ligule** 2.0–2.6 mm, membranous, lanceolate, apex entire, or deeply lacerate; glabrous, or with both surfaces hairy; hairs 0.15–0.18 mm long. **Leaf-blade** (20)–40–(60) × (1.0)–1.2–2.4–(3.0) mm, yellow-green to dark green, flat, narrow linear-lanceolate, finely ribbed, ribs smooth (sometimes minutely scabrid); margins minutely scabrid. **Panicle** 20–40–(80) mm long, linear to ± pyramidal, usually with basal branch or branch pair reflexed (often unevenly so); rachis glabrous (sometimes bearing a few minute prickletooth), branches 20–30 mm long, scabrid, binate, initially contracted but as inflorescences mature, spreading to reflexed, devoid of spikelets in lower half to two-thirds; pedicels appressed to branchlets, 0.20–0.25–(0.30) mm long, finely pubescent. **Spikelets** 2.7–3.0 mm, 1-flowered, lanceolate, light green. **Glumes** pale green (± hyaline), glabrous, ovatelanceolate to ovate, acute, 1-nerved, nerve sometimes extending beyond apex as a minute mucro, margins initially entire, becoming erose near apex, very sparsely ciliate in upper third; lower glume 0.5–0.6 mm, upper glume 0.75–0.8–(0.9) mm. **Lemma** 2.0–2.8–(3.0) mm, light green to cream, ovate-lanceolate to lanceolate, acute, apex mucronate (mucro 0.1 mm long), 5-nerved, the inner 3 nerves conspicuous, the outer less prominent; nerves bearing evenly spaced minute (0.02–0.03 mm long), antrorse, appressed prickletooth, interstices usually densely (sometimes sparsely) covered with minute antrorse prickletooth. **Palea** 2.0–2.8 mm, lanceolate, green to purple-green, 1–2-nerved, nerves bearing evenly spaced minute prickletooth (0.02–0.03 mm long) teeth, interstices usually glabrous, sometimes sparsely covered with minute prickletooth. **Rachilla** prolongation 0.8 mm, filiform, hyaline, glabrous except for sparse cilia cresting prolongation apex. **Stamens** 3. **Filaments** 0.6–0.9 mm long, hyaline. **Anthers** 1.0–1.2 mm, yellow. **Ovary** narrowly ovoid to weakly trigonous 1.0 mm long, pale green, glabrous; styles apical, 1.0–1.2 mm, hyaline; stigmas plumose, white. **Caryopsis** 1.2–1.4–(1.5) mm long, laterally compressed, pale orange to orange-brown when mature.

SIMILAR TAXA

Most similar to *Simplicia laxa* from which it is distinguished by the culm internodes which are longer than the subtending leaf sheaths and consistently glabrous; and by the strongly ribbed, dull dark brown basal sheaths, whose ribs are glabrous or pubescent (if pubescent then with the hairs 0.10–0.15 mm long). The mid-stem and upper-stem leaf sheaths of *Simplicia felix* are strongly ribbed and usually glabrous. The leaf surfaces and margins are mostly smooth though the ribs and leaf margins may be minutely scabrid. The inflorescences of *Simplicia felix* are smaller (up to 80 mm long rather than 150 mm long as in *S. laxa*), and the branches are scabrid rather than antrorsely hairy. Although the lemma of both species overlap in range, those of *S. felix* tend to be shorter (2.0–3.0 mm long) than those of *S. laxa* (2.8–3.4 mm long) and minutely scabrid rather than pubescent. The rachilla prolongation of *S. laxa* is narrowly lanceolate, 1.25–1.30 mm long and with the margins minutely ciliate, while that of *S. felix* is filiform, 0.8 mm long and bearing sparse cilia only near the apex. *Simplicia felix* is not closely allied to *S. buchananii* from which it is distinguished by the lax, sprawling, rather than erect culms; linear-pyramidal rather than linear inflorescences with binate branching, and by the lower branch or branches usually reflexed rather than appressed to the rachis. The pedicels of *S. felix* are also pubescent rather than glabrous (rarely minutely scabrid). For more information see de Lange et al. (2016).

DISTRIBUTION

Endemic. New Zealand: North Island (from near Taihape to Wairarapa), South Island (one occurrence in North Otago).

HABITAT

A species of eastern lowland to lower montane, often riparian, seasonally dry (drought prone) Podocarp forests overlying base-rich substrates such as limestone, calcareous mudstone and siltstone. It has been found once outside these habitats in North Otago growing within a limestone overhang.

THREATS

Simplicia felix occupies a very small area of only a few square metres wherever it occurs. It appears to have quite specific light requirements and tolerates only limited competition from other ground-cover species. The healthiest populations occur at sites where competition is reduced by grazing from cattle and sheep. While grazing apparently benefits *S. felix*, it will ultimately lead to the collapse of the forest canopy necessary for *S. felix* to survive. Collectively, *Simplicia felix* occupies <1 ha, so meeting the criteria for Threatened—Nationally Critical B2 (Townsend et al. 2008), qualified 'DP' (Data Poor) and 'RR' (Range restricted).

GENUS

Simplicia

FAMILY

Poaceae

AUTHORITY

Simplicia felix de Lange, J.R.Rolfe, Smissen et Ogle

SYNONYMS

None - first described in 2016

ENDEMIC TAXON

Yes

ENDEMIC GENUS

Yes

ENDEMIC FAMILY

No

FLOWERING

December–February

FRUITING

January–April

PROPAGATION TECHNIQUE

Easily grown from rooted pieces and stem node cuttings. Does best in shaded sites. Difficult to maintain. Dislikes competition.

ETYMOLOGY

felix: Taken from the Latin word for 'lucky' .

MANAAKI WHENUA ONLINE INTERACTIVE KEY

[Key to the grasses of New Zealand](#)

CHROMOSOME NUMBER

2n = 28

PREVIOUS CONSERVATION STATUSES

2017 | Threatened – Nationally Critical | Qualifiers: DP, RR

2016 | Threatened – Nationally Critical

[Jump to current conservation status](#)

REGIONAL CONSERVATION STATUSES

Otago: 2025 | Regionally Threatened – Regionally Critical | Qualifiers: DPR, DPS, DPT, NR, OL, PE 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

de Lange PJ, Smissen RD, Rolfe, JR, Ogle CC. 2016. Systematics of *Simplicia* Kirk (Poaceae: Agrostidinae)—an endemic, threatened New Zealand grass genus. *PhytoKeys* 75: 119–144.

<http://dx.doi.org/10.3897/phytokeys.75.10328>

Townsend AJ, de Lange PJ, Norton DA, Molloy J, Miskelly C, Duffy C. 2008. New Zealand Threat Classification manual. Department of Conservation, Wellington, NZ. 35 p.

<https://www.doc.govt.nz/globalassets/documents/science-and-technical/sap244.pdf>.

ATTRIBUTION

Fact Sheet prepared for NZPCN by P.J. de Lange (12 December 2016). Description adapted from de Lange et al. (2016).

NZPCN FACT SHEET CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Simplicia felix* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. <https://www.nzpcn.org.nz/flora/species/simplicia-felix/> (Date website was queried)

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/simplicia-felix/>

PDF DATE

25 May 2026