Pterostylis irwinii

COMMON NAMES
greenhood

BIOSTATUS
Native – Endemic taxon

CURRENT CONSERVATION STATUS
2023 | Threatened – Nationally Vulnerable | Qualifiers: Sp, DPR, DPS, DPT, EF

Jump to previous conservation statuses

CATEGORY
Vascular

STRUCTURAL CLASS
Orchids

FLOWER COLOURS
Green, White



Takaka Hill. Photographer: Eric Scanlen, Licence: CC BY-NC.



Pterostylis irwinii. Photographer: Peter J de Lange, Licence: CC BY-NC.

DETAILED DESCRIPTION

Terrestrial tuberous herb growing in diffuse colonies. Plants dimorphic. **Sterile plants** 60–100 mm tall; 2–3-leaved; leaves linear, 40–120 × 30–50 mm, dark green, entire acuminate. **Flowering plants** 150–200 mm tall, stems reddish. **Leaves** 3–5, cauline, widely spaced, spreading; lamina linear, 60–170 × 4–5 mm, dark green to bronze-green, glossy beneath, sessile, sheathing at base; margins entire; apex acuminate. **Pedicel** 20 mm long, slender. **Ovary** linear, 10–13 mm long, ribbed, reddish or red-brown. **Flower** solitary, 35–45 × 10–12 mm, erect, translucent white and dark green with red to red-brown suffusions in the apex of the galea and lateral sepals; galea shallowly gibbous at the base then erect before bending forwards, the apex erect to obliquely erect, the dorsal sepal much longer then the petals. **Dorsal sepal** ovate-lanceolate in outline when flattened, 43–48 × 14–16 mm, expanded near the base then tapered to the long-acuminate or attenuate apex. **Lateral sepals** obliquely erect to erect, hardly embracing the galea, leaving a very wide lateral gap to the petal margins, much of the labellum visible through this gap; upper part of sinus flat when viewed from the side, with a deep, relatively wide central notch when viewed from the front; internally the sinus projecting inwards as a small platform-like projection; conjoined part 14–16 × 8–10 mm, prominently scabrid, narrowed to 2.5 mm wide at base, tapered into the free points; free points 24–27 mm long, involute, tapered, erect, the tips extending above the galea. **Petals** obliquely linear-lanceolate, 30–33 × 3–4 mm, strongly falcate, long-acuminate, green with white stripes, red-brown toward the apex. **Labellum** erect, curved forwards in the distal third, the apex protruding prominently through the sinus in the set position; labellum hinge ligulate, 3 × 2 mm; lamina oblong-lanceolate, 15.0–18.0 × 3.2–3.5 mm, red-brown; apex subobtuse to acute; callus raised, 0.7 mm wide near apex; basal appendage 3.0–3.5 mm long, penicillate. **Column** 14–16 mm long, bent away from the ovary at 35 degrees at the base then erect, green and white; column foot 4 mm long. **Column wings** 6–7 mm long; basal lobe 3 × 1 mm, at an angle of about 35 degrees; apex obtuse; inner margins incurved, sparsely and shortly ciliate; mid-section 3 mm long, green; apical lobe 1.3 mm long, linear,obtuse. **Stigma** narrowly scutiform 3–4 × 2 mm, medial on the column, raised. **Anther** 1.8 mm long, very shortly rostrate. **Pollinia** linear-falcate, 1.5–1.8 mm long, yellow, mealy.

SIMILAR TAXA

Easily recognised by the larger, somewhat narrow flowers with reddish suffusions in the galea and lateral sepals; obliquely erect to erect galea; erect to obliquely erect lateral sepals held well away from the galea so leaving a wide gap between the margins of the galea and the petals, and by the extremely sensitive, oblong-lacneolate, reddish-brown labellum.

DISTRIBUTION

Endemic. New Zealand: North Island (Waimarino River Plain near Erua and near Cape Palliser), South Island (mainly in the north-west as far south as the Buller River, and also down the Wairau River; exact distribution still unclear). Easily overlooked on account of its short flowering season.

HABITAT

Montane (mostly above 600 m a.s.l.). Although exact habitat preferences are uncertain this species seems to prefer damp, shaded, or well-lighted situations in tall forest along river flats, or in steep hill country overlying primarily base-rich geologies (especially calcareous mud and siltstones, limestone, marble and soils derived from andesitic tephra).

GENUS

Pterostylis

FAMILY

Orchidaceae

AUTHORITY

Pterostylis irwinii D.L.Jones, Molloy, et M.A.Clem.

SYNONYMS

None (first described in 1997)

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY
No

FLOWERING
November–December

FRUITING
January

PROPAGATION TECHNIQUE
Difficult—should not be removed from the wild.

PLANT OF THE MONTH
This plant has been featured as a Plant of the Month – see Trilepidea: NZPCN newsletter for December 2022 for the full story.

ETYMOLOGY
pterostylis: Winged column

MANAAKI WHENUA ONLINE INTERACTIVE KEY
Key to native orchids of New Zealand

NVS CODE
PTEIRW

PREVIOUS CONSERVATION STATUSES
2017 | Threatened – Nationally Endangered | Qualifiers: DP, EF, Sp
2012 | Threatened – Nationally Vulnerable | Qualifiers: DP, EF, Sp
2009 | Threatened – Nationally Endangered | Qualifiers: DP, EF, Sp
2004 | Data Deficient
Jump to current conservation status

REFERENCES AND FURTHER READING
de Lange PJ, Heenan PB, Norton DA, Rolfe JR, Sawyer JWD. 2010. Threatened Plants of New Zealand. Canterbury University Press, Christchurch. 471 p.
Jones DL, Molloy BPJ, Clements MA. 1997. Six new species of *Pterostylis* R.Br. (Orchidaceae) from New Zealand. *The Orchadian 12*: 266–281. https://www.biodiversitylibrary.org/page/62046409#page/270/mode/1up.

ATTRIBUTION
Fact Sheet prepared for NZPCN by P.J. de Lange 14 April 2007: Description based on Jones et al. (1997).

NZPCN FACT SHEET CITATION
Please cite as: de Lange, P.J. (Year at time of access): Pterostylis irwinii Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. https://www.nzpcn.org.nz/flora/species/pterostylis-irwinii/ (Date website was queried)

MORE INFORMATION
https://www.nzpcn.org.nz/flora/species/pterostylis-irwinii/

PDF DATE
25 May 2026