

# Pterostylis irwinii

## COMMON NAMES

greenhood

## BIOSTATUS

Native

## CATEGORY

Vascular

## STRUCTURAL CLASS

Orchids

## FLOWER COLOURS

Green, White

## 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. **Pedice**l 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 than 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.



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

## 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-lanceolate, 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).

## CURRENT CONSERVATION STATUS

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

## DETAILED TAXONOMY

### 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

## ECOLOGY

### FLOWERING

November–December

### FRUITING

January

### PROPAGATION TECHNIQUE

Difficult—should not be removed from the wild.

## OTHER INFORMATION

### 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

## REFERENCING AND CITATIONS

### 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

12 October 2024