

Pterostylis brumalis

COMMON NAME

kauri greenhood, winter greenhood

SYNONYMS

Diplodium brumale (L.B.Moore) D.L.Jones, Molloy et M.A.Clem.

FAMILY

Orchidaceae

AUTHORITY

Pterostylis brumalis L.B.Moore

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Orchids

NVS CODE

DIPBRU

CHROMOSOME NUMBER

$2n = 50$

CURRENT CONSERVATION STATUS

2017 | Not Threatened

PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

DISTRIBUTION

Endemic. New Zealand: North Island (Te Pahi to Kawhia Harbour and the northern Kaimai Ranges; most common north of Thames and Auckland City).

HABITAT

Coastal to lower montane. Virtually confined to forests dominated by kauri (*Agathis australis* (D.Don). Lindl.) where it prefers shaded sites, and usually grows in kauri leaf litter and leaf mould, often directly beneath the trunks of this species. It may also grow in gumland scrub but usually then only in association with rotting kauri stumps or subfossil kauri leaf and gum deposits.



Kauri Glen, Northcote, Auckland. Photographer: Jeremy R. Rolfe, Date taken: 21/07/2006, Licence: CC BY.



Kauri Glen, Northcote, Auckland. Photographer: Jeremy R. Rolfe, Date taken: 21/07/2006, Licence: CC BY.

DETAILED DESCRIPTION

Terrestrial, colony forming, perennial herb. Plants at flowering up to 200 mm tall. **Stem** bright green often tinged with red, slender, terete, smooth; internodes usually < leaves. **Petiolate leaves** in separate loose rosettes or at the base the lower part of flowering stem; petiole distinct, up to 10 mm long; leaf lamina 5–12 × 5–12 mm, bright green or green, ovate-orbicular, apex subacute, upper leaf surface smooth. **Cauline leaves** 2–6, usually closely spaced and aggregated toward top of stem, subsessile to sessile, the lower pair transitional in shape between rosette and mid to upper cauline leaves, 15–40 × 2–8 mm, bright green to green, linear-lanceolate or narrow-elliptic, uppermost leaves usually overtopping ovary but usually falling short of the galea. **Flower** 1–(2) erect, most white with narrow dark green stripes. **Dorsal sepal** 15–30 mm tall, apex acuminate, usually down-curved. **Lateral sepals** diverging at a wide angle to form a U or a wide W shape when viewed from the front, the sinus distinctly jugate in side view, tips long-caudate and much overtopping galea. **Petals** almost as long as dorsal sepal, with a broad, more or less horizontal marginal strip exposed. **Labellum** narrow-triangular, arched and protruding, apex subacute. **Column** shorter than labellum; stigma elliptic, slightly prominent.

MANAAKI WHENUA ONLINE INTERACTIVE KEY

Key to native orchids of New Zealand

SIMILAR TAXA

Very distinctive and not easily confused with other *Pterostylis* species. The flower has a very strongly incurved dorsal sepal with the petals held horizontally thus imparting a distinctive cobra-hooded appearance. The prominent jug-shaped sinus of the lateral sepals is shared with *P. alveata* Garnet and *P. trullifolia* Hook.f. but is absent from *P. alobula* (Hatch) L.B.Moore. From all these species *P. brumalis* is separated by the linear-lanceolate or narrow-elliptic mid to upper stem leaves which tend to be aggregated toward the stem apex. Ecologically *P. brumalis* is restricted to kauri forest.

FLOWERING

June–October

FLOWER COLOURS

Green, White

FRUITING

July–November

LIFE CYCLE

Minute seeds are wind dispersed (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

Difficult—should not be removed from the wild

ETYMOLOGY

pterostylis: Winged column

WHERE TO BUY

Not commercially available

TAXONOMIC NOTES

Jane et al. (2010) following a thorough rDNA (ITS) based analysis of the segregate genera erected for *Pterostylis* R.Br. by Szlachekto (2001) and Jones et al. (2002) found no support to continue their recognition. This view is followed here.

ATTRIBUTION

Description adapted from Moore and Edgar (1970)

REFERENCES AND FURTHER READING

- Janes JK, Duretto MF. 2010. A new classification for subtribe Pterostylidinae (Orchidaceae), reaffirming *Pterostylis* in the broad sense. *Australian Systematic Botany* 23: 260–269. <https://doi.org/10.1071/SB09052>.
- Jones DL, Clements MA, Molloy BPJ. 2002. A Synopsis of the Subtribe *Pterostylidinae*. *Australian Orchid Research* 4: 129–146.
- Moore LB, Edgar E. 1970. Flora of New Zealand, Volume II. Indigenous Tracheophyta: Monocotyledones except Gramineae. Government Printer, Wellington, NZ. 354 p.
- Szlachekto, D.L. 2001: Genera et Species Orchidaliium 1. *Polish Botanical Journal* 46(1): 11–26.
- Thorsen MJ, Dickinson KJM, Seddon PJ. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285–309. <https://doi.org/10.1016/j.ppees.2009.06.001>.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/pterostylis-brumalis/>