

Pterostylis agathicola

COMMON NAME

kauri greenhood

SYNONYMS

Pterostylis graminea var. *rubricaulis* H.B.Matthews ex Cheeseman nom. inval.; *Pterostylis montana* var. *rubricaulis* (H.B.Matthews ex Cheeseman) Hatch nom. inval.

FAMILY

Orchidaceae

AUTHORITY

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

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Orchids

NVS CODE

PTEAGA

CHROMOSOME NUMBER

2n = 44

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 Paki south to Te Kauri Park Scenic Reserve in the west and the northern Kaimai Range in the east).

HABITAT

Coastal to montane (up to 720 m a.s.l). Virtually confined to kauri (*Agathis australis* (D.Don) Lindl.)-dominated forest where it usually found growing in leaf litter close to the trunks of large kauri trees.



Puketi forest, November. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



Trounson Kauri Park. Photographer: Jeremy R. Rolfe, Date taken: 17/07/2006, Licence: CC BY.

DETAILED DESCRIPTION

Terrestrial tuberous herb growing as solitary plants or in diffuse colonies. Plants dimorphic. **Sterile plants** 60–100 mm tall; 2–3-leaved; leaves narrowly linear-lanceolate, 30–60 × 3–6 mm, dark green, entire, acute to acuminate. **Flowering plants** 100–350 mm tall, stems green or pale green, rarely reddish. **Leaves** 3–4, cauline, widely spaced, spreading; lamina narrowly lanceolate, 40–100 × 5–8 mm, dark green or pale green, sessile, sheathing at base; midrib prominent; margins entire; apex acuminate. **Pedicels** 10 mm long, slender. **Ovary** 9–12 mm long, ribbed. **Flowers** 1–(2), 24–28 mm long, erect or slightly leaning forwards, translucent white and dark green with red brown suffusions at the apex of the galea and lateral sepals; galea gibbous at the base then erect before bending forwards, the apex flat, erect or decurved, the dorsal sepal much longer than the petals. **Dorsal sepal** ovate-lanceolate in outline when flattened, 33–37 × 12–16 mm, prominent expanded near the base then tapered to the long-acuminate apex. **Lateral sepals** erect, loosely embracing the galea leaving a prominent lateral gap to the petal margins; upper part of sinus flat or shallowly mounded when viewed from the side, with a deep narrow, central notch when viewed from the front; conjoined part 8–11 × 6–9 mm, narrowed to c. 2.5 mm wide at the base, tapered into the free points; free points 20–26 mm long, tapered, erect, the tips extending high above the galea. **Petals** obliquely linear-lanceolate, 17–22 × 3–4 mm, strongly falcate, acuminate, green with white stripes, red-brown towards the apex. **Labellum** erect, curved forwards in the distal 1/3, the apex twisted strongly to the right and protruding prominently through the sinus in the set position; labellum hinge ligulate 3 × 2 mm; lamina narrowly ovate-lanceolate to elliptical lanceolate, 9.0–11.0 × 3.0–3.3 mm, dark green to brownish with a darker reddish central callus, apex subobtusate to slightly emarginate; callus 0.6 mm wide near apex, raised; basal appendage 2.5–3.0 mm long, decurved, apex penicillate. **Column** 12–14 mm long, bent away from the ovary at 45 degrees at the base then erect, green and white; column foot 4 mm long. **Column wings** 5–6 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 2.5 mm long; green; apical lobe 1 mm long, linear, obtuse. **Stigma** scutiform 3.0–3.5 × 2.0 mm, medial on the column, raised. **Anther** 1.8 mm long, very shortly rostrate. **Pollinia** linear-falcate, 1.3–1.4 mm long, yellow, mealy. **Capsules** narrowly-ellipsoid, 20–24 × 5–7 mm.

MANAAKI WHENUA ONLINE INTERACTIVE KEY

[Key to native orchids of New Zealand](#)

SIMILAR TAXA

Easily recognised by the early flowering habit; mostly reddish stem; 3–4 widely spaced, spreading leaves; large (for size of plant) flowers (24–28 mm long); long and slender, spreading free points on the lateral sepals; and by the labellum apex constricted and twisted to the right. Ecologically it is particularly distinctive through its restriction to kauri forest where it often grows with *Pterostylis brumalis* L.B.Moore.

FLOWERING

July–October

FLOWER COLOURS

Green, White

FRUITING

August–December

PROPAGATION TECHNIQUE

Difficult—should not be removed from the wild. Extremely mycorrhizal.

ETYMOLOGY

pterostylis: Winged column

WHERE TO BUY

Not commercially available

ATTRIBUTION

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

REFERENCES AND FURTHER READING

Jones DL, Molloy BPJ, Clements MA. 1997. Six new species of *Pterostylis* R.Br. (Orchidaceae) from New Zealand. *The Orchadian* 12: 266–281.

NZPCN FACT SHEET CITATION

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<https://www.nzpcn.org.nz/flora/species/pterostylis-agathicola/> (Date website was queried)

MORE INFORMATION

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