

Gastrodia cunninghamii

COMMON NAME

black orchid, black potato orchid, pereii

SYNONYMS

None

FAMILY

Orchidaceae

AUTHORITY

Gastrodia cunninghamii Hook.f.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Orchids

NVS CODE

GASCUN

CHROMOSOME NUMBER

$2n = c.40, 40$

CURRENT CONSERVATION STATUS

2012 | Not Threatened

PREVIOUS CONSERVATION STATUSES

2009 | Not Threatened

2004 | Not Threatened

DISTRIBUTION

Endemic. North, South, Stewart and Chatham Islands. Uncommon north of the Waikato.

HABITAT

Usually montane and mostly in beech (*Nothofagus Blume*) dominated forests. Often found in montane pine forest plantations. Sometimes found at lower altitudes in dark hollows within forest, especially in naturally cold sites.



Gastrodia. Photographer: DoC



Butterfly Creek, Eastbourne. Photographer: Jeremy Rolfe

FEATURES

Terrestrial, saprophytic, deciduous, fleshy, perennial herb lacking chlorophyll. Rhizome mycorrhizal, tuberous, rather swollen, short-lived, extensively branched, individual sections up to 250 x 50 mm, dull pale brown to brownish-black, often covered in chartaceous scales and scale-leaves, especially toward the active apex. Plant at flowering up to 1.4 m tall. Stem 4-10 mm diameter, dark brown to brown-black with lighter brown coloured, small spots, erect, stout or slender, rather brittle when fresh. Scale leaves widely spaced, chartaceous. Flowers up to 100, unscented, erect to pendulous (rarely with the flower touching the stem axis), tuberculate, tubercles paler in colour. Perianth 14-20 x 4-6 mm, brownish, brownish-black, or greenish; lobes slightly thickened toward margins. Lateral sepals fused slightly above the gibbous base but with their margins lying close together, often more or less overlapping. Labellum 10 x 4 mm, white or cream, membranous, not irritable, completely enclosed within floral tube (apex just visible), oblong, trilobed, base thickened, twisted and fused for most of length of perianth-tube, lateral-lobes with upturned, irregular, crenate-cristate, margins; mid-lobe yellowish with flat but irregular margins, bearing several long median, cristate, yellowish calli, apex black or brown. Column much shorter than labellum, wing minute, present as a more or less curved process; anther terminal, erect and bending forwards, short and broad, operculate, filament transversely pleated at the back, pollen breaking into angular granules; stigma basal, immediately below anther, broadly ellipsoid, hollow; rostellum flap-like, positioned under anther.

SIMILAR TAXA

Gastrodia cunninghamii is most likely to be confused with *G. cooperae* and *G. molloyi* species from which it is easily distinguished by the short rather than long column (thus the column is not visible at the flower mouth). From *G. sesamoides* it is distinguished by the tuberculate surfaces of the stem and flowers, and short, rather than long column.

FLOWERING

October - March

FLOWER COLOURS

Brown, White

FRUITING

December - May

LIFE CYCLE

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

PROPAGATION TECHNIQUE

A saprophytic species which should not be removed from the wild. Difficult to grow.

ETYMOLOGY

gastrodia: Belly tooth (flower centre)

cunninghamii: Named after Allan Cunningham (1791 – 1839) who was an English botanist and explorer, primarily known for his travels to Australia (New South Wales) and New Zealand to collect plants. Author of *Florae Insularum Novae Zelandiae Precursor*, 1837-40 (Introduction to the flora of New Zealand).

WHERE TO BUY

Not commercially available

CULTURAL USE/IMPORTANCE

The tubers were a much sought after food by Maori.

ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (14 April 2008). Description adapted from Moore and Edgar (1970)

REFERENCES AND FURTHER READING

Given, D.R. 1959. An unusual occurrence of *Gastrodia cunninghamii* Hooker. Auckland Botanical Society Journal, 16: 3-4

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285-309

NZPCN *Gastrodia* Key prepared by Jeremy Rolfe (pdf, 5Mb)

CITATION

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

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/gastrodia-cunninghamii/>