Gastrodia cunninghamii

COMMON NAME
Black orchid, black potato orchid, perei

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

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.
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, tubercules 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
NZPCN Gastrodia Key prepared by Jeremy Rolfe (pdf, 1.2Mb)