

Euphrasia semipicta



Euphrasia semipicta.
Photos W. Potts.

FAMILY: SCROPHULARIACEAE

BOTANICAL NAME: *Euphrasia semipicta*,
W.R.Barker, *J. Adelaide Bot. Gard.* 5: 139
(1982)

COMMON NAME: Peninsula eyebright

COMMONWEALTH STATUS: (*EPBC Act*)
Endangered

TASMANIAN STATUS: (*TSP Act*) endangered

Description

A relatively short-lived (up to 3 to 5 years) perennial herb. **Stems:** The stems are erect with up to 20 branches, sometimes more. Branching occurs above ground level. In flower, the plant is usually no more than 35 cm in height. **Leaves:** The leaves are green, sometimes reddened in parts, and occur in opposite pairs with alternate pairs arising from the stem at right angles to each other. The leaves just below the first flower are about 5 to 10 mm long and 3 to 5 mm wide, with usually no more than 3 teeth on the distal half. The leaves appear semi-succulent and the underside has characteristic patches of glands typical of most eyebrights. **Flowers:** The flowers are in racemes (succession of flowers along stem, oldest ones at base) and are situated at the ends of the branches. The racemes have up to 5 to 10 pairs of flowers arranged similarly to the leaves. The flower stalks are slender, with floral bracts (leaf-like structures associated with flowers) that are similar to the foliage leaves. The flowers are variable in size and are hooded with the lower lip larger than the upper. The flowers can be white, pink or purple with widely spreading, three lobed lower lips. Purple lines often extend from the throat. Flowers can sometimes have a yellow spot on the lower lobe below the anthers. The stamens (male flower parts) have red-brown coloured anthers (containing pollen) each with a short projection (awn) into the throat of the flower. The anther backs can be covered with hairs. Peak flowering occurs in early spring with some autumn flowering dependent on season. **Fruit:** The fruit is a capsule, which is slightly flattened and oblong in outline and between 6-8 mm long and 2.2-3.0 mm broad (description from Barker 1982, Potts 1997).



Confusing species: *Euphrasia semipicta* differs from other species of *Euphrasia* by flower size, a lack of glandular hairs on leaves and bracts, an above ground branching pattern, corolla striations (sometimes absent in some individuals) and generally non-hairy anther backs. Three forms of *Euphrasia semipicta* have been described (Potts 1997).

Distribution and Habitat

Euphrasia semipicta is endemic to Tasmania and occurs in coastal heathy woodland and heath, particularly along animal, walking and vehicular tracks (W. Potts pers. comm.). The habitats of *Euphrasia* species are associated with the availability of open patches of ground maintained by fire or disturbance, the proximity of low vegetation and relatively high soil moisture in spring (Potts 1997, 2000).

Key Sites and Populations

Five populations of this species have been confirmed in recent years, with the number of individuals in each population ranging from a few plants to the low thousands (Potts 1997).

Known Reserves

Reserved in the Tasman National Park. Previously known from the Eaglehawk Bay State Reserve. Two populations are in State Forest.

Ecology and Management

This relatively short-lived species requires disturbance to create open patches of ground to ensure germination and hence the above-ground persistence of populations. In the absence of fire and grazing, the presence of tracks will enable the persistence of this species by creating the open environment that is required. Populations are generally relatively small due to the limited availability of suitable habitat. Population size is also determined by moisture availability, as the new seedlings require a relatively high level to survive. The species is semi-parasitic and high moisture levels are required until it parasitises hosts through root attachments. The non-host specific semiparasitic nature of the species makes it indirectly susceptible to additional threats, such as *Phytophthora cinnamomi* if it occurs in habitat such as heathland with a high proportion of susceptible species.

The failure to locate some populations recorded prior to the early 1970s in recent years despite apparently suitable conditions for re-establishment from a soil seed bank suggests that this taxon is in decline. Its recruitment requirements make the species susceptible to the effects of climate change, evidenced by the trend towards warmer, drier summers in recent times.

The species has persisted through forestry operations in native forest and may have benefited from the associated disturbance, particularly the additional roading.

This species has been included in the lowland *Euphrasia* Recovery Plan (Potts 2000). The main objectives of this plan include the following:

1. Securing protection of existing populations from potentially detrimental changes in land use or disturbance patterns.
2. Recovering declining populations by management of habitat.
3. Developing mechanisms to manage populations in the long term.

The main actions involve the identification of populations including taxonomic work to ensure these species can be correctly and effectively managed. Protection and recovery will also involve further investigation of the species' ecology and the possible use of fire as a management tool.

Insects are the most likely pollination vector for this species (A. Hingston pers. comm.).

Conservation Status Assessment

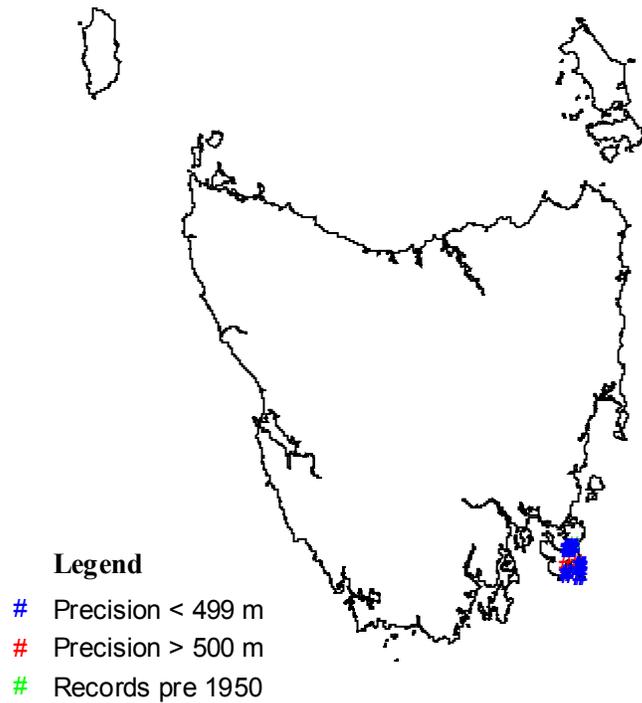
There is no immediate need for reassessment of *Euphrasia semipicta*. Reassessment will be required should the different forms of the species be formally described as separate taxa (see Potts 1997).

Further Information

- Barker, WR 1982, 'Taxonomic Studies in *Euphrasia* L. (Scrophulariaceae) a Revised Infrageneric Classification, and a Revision of the Genus in Australia', *J. Adelaide Bot. Gard.*, vol.5, pp.1-304.
- Potts, WC 1997, *The conservation biology of threatened lowland Euphrasia taxa in south-eastern Tasmania*. Report to Environment Australia for Endangered Species Unit Project number 428. Parks and Wildlife Service.
- Potts, WC 2000, *Recovery Plan for Threatened Tasmanian Lowland Euphrasia Species*, Department of Primary Industries, Water and Environment, Hobart.

Tasmanian Distribution

(As per Threatened Species Unit records, June 2003)



1:25 000 Map Sheets

Hippolyte, Port Arthur, Raoul, Taranna, Tasman.

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