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RARE TAXA IN THE GENUS *EUPHRASIA* L. FROM LOWLAND SOUTH-EASTERN TASMANIA

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INTRODUCTION

In the last ten years much work has been done by Barker (1982, 1987) to describe the taxonomy of the genus *Euphrasia* L. of which there are currently 21 species recognised in Australia. Some of these are named only informally and some are split into many subspecies. Many of these taxa are very attractive herbaceous wildflowers.

Tasmania is well represented by having eight species of *Euphrasia* L., two of which are represented by eight or nine subspecies. Four of these species are restricted to lowland habitats in the south-east of Tasmania, with a subspecies of another species also so restricted. Most of these five taxa are geographically very limited, with some being known from very few sites. In this paper I review the five taxa restricted to lowland south-eastern Tasmania and provide details of recent observations and searches.

The five taxa which I discuss fall into two groups. *E. phragmostoma* W. R. Barker and *E. amphisysepala* W. R. Barker are in the section *Phragmostomae*, while *E. semipicta* W. R. Barker, *E. sp 'Southport'* and *E. gibbsiae* Du Ritz ssp. *psilantha* (FvM.) W.R. Barker are in section *Striatae*. The section *Phragmostomae* is endemic to Tasmania and comprises only two species on the cliffs of the Tasman Peninsula. Section *Striatae* is mostly confined to Tasmania and is well represented on Tasmania's mountains.

E. phragmostoma W. R. Barker

E. phragmostoma is a perennial herb with large uniformly cream flowers. The plant is straggly and brittle, growing to about 40cm in height, but usually less. Many flowering stems grow erect from prostrate main stems, in common with many Tasmanian species of *Euphrasia*.

E. phragmostoma has been collected most often from cliff edges. Its known distribution extends from Fortescue Bay to the Chasm at Cape Pillar with an old collection from a "mountain top" at Marion Bay.

I first noted *E. phragmostoma* near sea level on the eastern side of Bivouac Bay on 29 January 1984. At this time there was no flowering material. Subsequently on 4 October 1986 I collected flowering material from a large group of plants growing in recently burned rocky bushland just above the coastal rocks. One plant was seen emerging from a crevice in the rocks below the general level of vegetation. Some of the plants collected at this time were described as first-year plants while others were second-year plants (Barker, 1987).

On 18 August 1990 I again visited the site where I had collected *E. phragmostoma* in 1986. By this time the coastal scrub had regrown into a very dense thicket and there was no sign of *E. phragmostoma*. It would appear that the earlier flush of growth was brought on by the fire and another fire may be required for the reappearance of the species at this site.

E. amphisysepala W. R. Barker

Barker (1982) noted in his description of *E. phragmostoma* that an unusual specimen had been found on Cape Hauy which did not match most of the other collections of this species.

On 25 May 1986 I was climbing down to the bottom of the chasm on the track to Cape Hauy when Mrs Sue Collier noted a *Euphrasia* near the rim of the chasm. This plant was subsequently described as *E. amphisysepala*. Less than five plants were located and only one plant was in flower. Flowers were white with prominent red stripes and a yellow blotch in the throat. The plant differed in several other respects from *E. phragmostoma*, although they were similar in having long awns on two of the four stamens.

On 4 October 1986 I visited the same site to collect more flowering material and conduct a search for more plants. A scrubby search around part of the rim of the chasm revealed approximately 20 plants, some of which endured dense shade under shrubs. A search along the south-facing coastal cliff edge near the

Cape revealed no further plants.

On 9 September 1989 I followed a new track to Mt Fortescue. This follows the cliff edge about 1.5km south-west of Cape Hauy. Along this stretch of the cliff edge there are several plants of *E. amphisysepala* restricted to very shady crevices near the top of the cliffs. No flowering material was seen on this occasion, nor on 1 April 1990.

E. semipicta W. R. Barker

E. semipicta is easily the most common of the species described in this paper, despite being described as "known from only a few localities in the eastern half of the Tasman Peninsula" by Barker (1982). Most plants that I have seen have pink-mauve flowers, but white flowers have also been recorded. The flowers form a dense spike at the end of a stem with widely spaced leaves in the upper part.

This species has been collected from Port Arthur south to Hurricane Heath near Cape Pillar. It is also found in the vicinity of Fortescue Bay near the two species in section *Phragmostomae*. An outlying population is found south of Port Arthur in the vicinity of Mount Brown. Part of this population appears to have been overlooked previously. These are distinctively miniature plants found around the cliff edge of Mount Brown itself. These plants nestle down in the shelter of dolerite stones in their very exposed habitat.

Euphrasia sp. 'Southport'

Euphrasia sp. 'Southport' had been collected only three times until recently. In 1855 and 1856 two collections were made by Charles Stuart. In 1958 Dr Winifred Curtis collected the species again. All of these collections had been from Southport. This species has small pink-mauve flowers which have the appearance of being only partly open.

On 11 November 1986 I led a group of 11 on a Hobart Walking Club trip to the Labillardiere Peninsula on Bruny Island. Mrs Hilary Goodwin observed a *Euphrasia* beside the track in a clump of *Melaleuca squarrosa*. I returned to collect and photograph this specimen which I judge to be *Euphrasia* sp. 'Southport' as described by Barker (1982).

On 23 October 1988 I returned to the same area near the end of the Peninsula. My wife and I conducted an extensive search of an area of low heathland beside the track. We located about ten plants of the same species we had seen two years

earlier. I made three collections of these plants. Unfortunately all of the collections from Bruny Island have been misplaced despite lodgement at the Tasmanian Herbarium.

On 8 January 1989 my wife and I visited an area near Southport where we had previously located the population of *Euphrasia* sp. 'Southport' discovered by Dr Winifred Curtis in 1958. Despite an extensive search we were only able to find about four plants beside an old 4WD track deeply shaded by *Melaleuca squarrosa*. Only one was in flower, which I collected. The identity of this has been confirmed as *Euphrasia* sp. 'Southport' by Dr W. R. Barker (pers. comm., 1990).

***E. gibbsiae* Du Ritz ssp. *psilantha* (FvM.) W.R. Barker**

E. gibbsiae ssp. *psilantha* is a distinctive subspecies which had most recently been collected in 1855 by Charles Stuart at "South Port". It is an erect herb with branches well above ground level and typical white *Euphrasia*-like flowers with purple striations.

On 12 September 1985 while walking in the Southport Lagoon Wildlife Sanctuary south of the Lagoon Mrs Sue Collier noticed a *Euphrasia* in flower. It was growing in a flat swampy area with water lying on the surface of nearby ground. The vegetation was sedgeland with scattered shrubs. Since this was an unusual place to find such a plant she and I searched for further plants without success. This proved to be the first collection of *E. gibbsiae* ssp. *psilantha* for 130 years.

Thinking that September was rather early to find this species in such a cool wet area I conducted a further search for plants 1 November 1986. On this occasion I did not find a single plant.

On 26 September 1987 I led a group of 23 members of the Hobart Walking Club to the same place to conduct a more extensive search. The group spread out and systematically walked through the target area. We discovered approximately 25 plants in the vicinity.

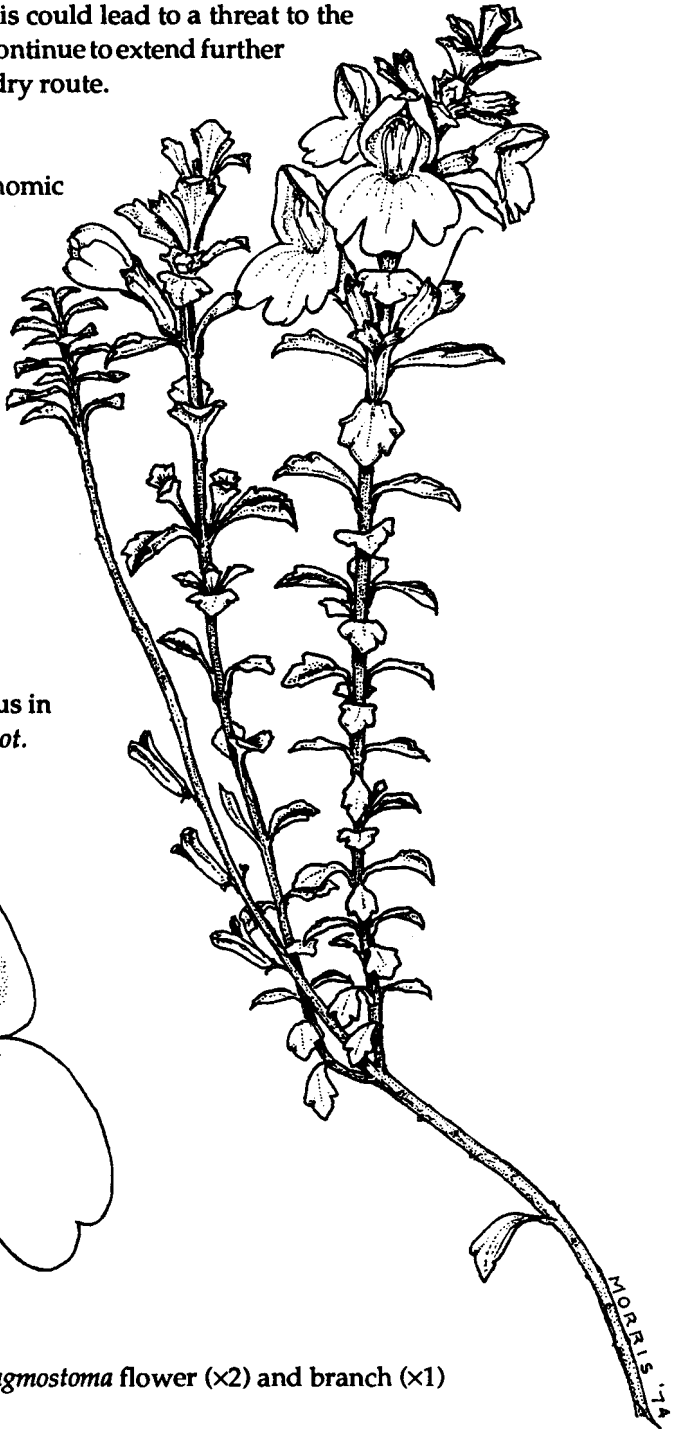
CONCLUSION AND DISCUSSION

There are a remarkable number of extremely rare taxa in the genus *Euphrasia* in lowland south-eastern Tasmania. Fortunately most of these exist in reserves of some sort. The only site which is unreserved is the Southport location of *Euphrasia* sp. 'Southport'. The habitat of *E. gibbsiae* ssp. *psilantha* is in the Southport Lagoon Wildlife Sanctuary, but there is evidence of substantial 4WD

activity in the vicinity. This could lead to a threat to the habitat if the wheel tracks continue to extend further as drivers strive to find a dry route.

REFERENCES

- Barker, W.R. (1982) Taxonomic studies in *Euphrasia* L. (Scrophulariaceae). A revised infrageneric classification, and a revision of the genus in Australia. *J. Adelaide Bot. Gard.* 5:1—304.
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Euphrasia phragmostoma flower (×2) and branch (×1)