

Epacris stuartii



Epacris stuartii. W. Potts.

FAMILY: EPACRIDACEAE

BOTANICAL NAME: *Epacris stuartii*, Stapf, *Kew Bull.* 7: 217 (1910)

COMMON NAME: Stuart's heath

COMMONWEALTH STATUS: (*EPBC Act*) Critically Endangered

TASMANIAN STATUS: (*TSP Act*) endangered

Description

A small, erect or semi-prostrate multi-stemmed shrub with robust branches (up to 1 m tall). **Leaves:** The leaves are heart-shaped or oval-shaped on young branches. They are between 4-7 mm long and 3-5 mm wide with short stalks. The leaves are thick, flat and spreading (however they are not bent backwards) with a thick glossy covering. They also have a sharp tip and three parallel veins on the lower surface. **Flowers:** The flowers appear in late winter to early spring. They are white and form loose clusters along the upper parts of the branches. The pollen sacs (anthers) and the female part that is receptive to pollen (stigma) protrude from the flower, which is solitary in the leaf axils (where the stem meets the leaf). **Fruit:** The fruit is a capsule that contains tiny, numerous seeds. Most herbarium specimens have been collected from August to November. **Confusing species:** *Epacris stuartii* differs from other *Epacris* species by its longer leaves and longer lobes on the floral tube, thicker and glossier leaves, shorter flower arrangement and its more robust branches. *Epacris stuartii* is also inclined to be partially prostrate rather than erect (description from Curtis 1963, Crowden & Menadue 1990, Keith 1996, Talbot n.d.).

Distribution and Habitat

Epacris stuartii is endemic to Tasmania and has only ever been recorded from Southport Bluff, which is approximately 6 km south east of the Southport Township. It occurs within the George III Monument Historic Site (adjacent to the Southport Lagoon Wildlife Sanctuary). This species occurs in heathland on an exposed dolerite headland. Most of the population is found in well-drained, shallow soils. A smaller section of the population grows on rocky outcrops with either no soil, or small amounts of soil or moss (Keith 1996).



Epacris stuartii habitat.
E. Lazarus

Key Sites and Populations

Epacris stuartii has only ever been recorded from one site on Southport Bluff. The single population is estimated to contain approximately 850 mature plants (Ilowski 2002). An *ex situ* population has been planted on nearby Southport Island.

Known Reserves

Reserved in the George III Monument Historic Site.

Ecology and Management

The root rot pathogen (*Phytophthora cinnamomi*) is the most serious threat to *Epacris stuartii*, as the disease has been detected less than one kilometre from the population. This is a major concern as invasion could easily be facilitated through animals or visitors to the historic monument. Inappropriate fire regimes involving high frequency fires or fires followed by drought also pose a threat. Although this species requires fire in order to recruit seedlings, population decline can happen if adverse environmental conditions occur post-fire, for example drought. Severe storms may also threaten this species through physical damage and excessive salt loads. Although these events are random and infrequent, the impacts are costly, particularly when combined with other threats (Keith 1996).

Implementation of a Recovery Plan for *Epacris stuartii* commenced in 1998. The main objective of this plan is to minimise the probability of extinction of *Epacris stuartii* in the wild. Actions include fire monitoring to ensure the prevention of fire reaching the population in the short term. This is particularly important, so as to allow the recovery of the population following the dramatic effects of storm damage in 1996 and fire in 1994.

A draft management strategy has also been prepared for the George III Historic Site and the nearby Southport Lagoon Wildlife Sanctuary. In order to prevent the spread of *Phytophthora cinnamomi* into the wild population, a popular walking track has been diverted away from the monument and the population has been fenced to prevent access.

An *ex situ* population was planted in 2001 on nearby Southport Island so as to prevent the species from becoming extinct should *Phytophthora cinnamomi* infect the wild population. The *ex situ* planting will be monitored and watered as necessary until it is fully established. A recent census by Threatened Species Unit staff found that the majority of plants had survived the harsh 2002-2003 summer drought.

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 *Epacris stuartii*.

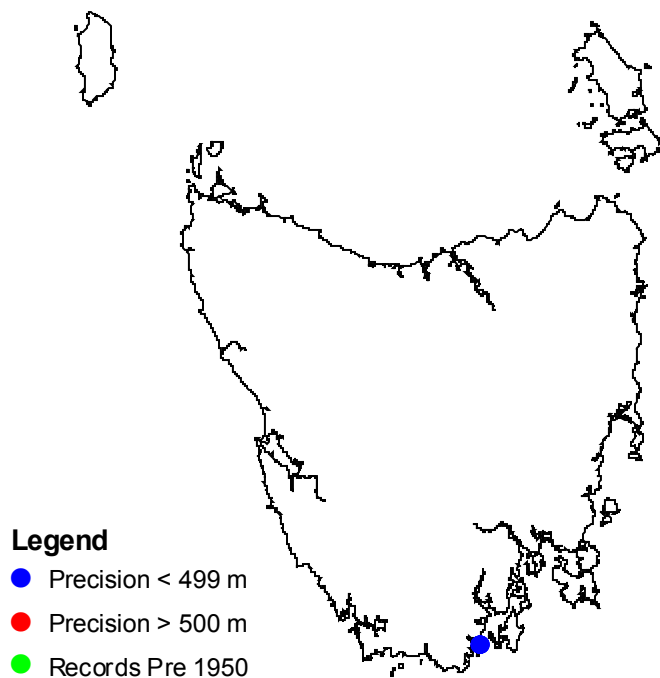
Further Information

- Crowden, RK & Menadue, Y 1990, 'Morphometric analysis of variation in the 'Epacris tasmanica complex' (Epacridaceae)', *Australian Systematic Botany*, Vol.3, pp.253-264.
- Curtis, WM 1963, *The Student's Flora of Tasmania*, Part 2, Government Printer, Hobart.

- Ilowski, M 2000, *Decision Support Manual: Epacris stuartii at Southport Bluff*, Threatened Species Unit, Department of Primary Industries, Water & Environment, Hobart.
- Keith, DA 1996, *Recovery Plan Epacris stuartii Stapf*. Parks and Wildlife Service, Department of Environment and Land management, Hobart.
- Keith, DA 1997, 'Combined effects of heat shock, smoke and darkness on germination of *Epacris stuartii* Stapf., an endangered fire-prone Australian shrub', *Oecologia*, Vol.112, pp.340-344.
- Talbot, A no date, *Epacris: Australian Plant Study Group*, Society for Growing Australian Plants, Victoria.

Tasmanian Distribution

(As per Threatened Species Unit records, April 2003)



1:25 000 Map Sheets

Leprena.

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