

Lomatia tasmanica



FAMILY: PROTEACEAE

BOTANICAL NAME: *Lomatia tasmanica*,
W.M.Curtis, *Stud. Fl. Tasm.* 3: 651 (1967)

COMMON NAME: King's lomatia

COMMONWEALTH STATUS: (EPBC Act)
Critically Endangered

TASMANIAN STATUS: (TSP Act)
endangered

Lomatia tasmanica.
A. Gray.

Description

A distinctive small tree, usually between 2-4 metres tall (sometimes up to 6-8 metres). This species is thin and spindly, usually branched at the top and may develop a leaning trunk with a few erect branches. The young stems and buds are densely covered in fine hairs. *Lomatia tasmanica* forms underground stems (rhizomes). **Leaves:** The leaves are green, shiny, shortly stalked, arranged alternately and crowded at the ends of the branches. They are either prickly-toothed or lobed and between 10-18 cm long and 2.5-4 cm broad (arranged like the barbs of a feather, with 7-10 pairs of stalkless leaflets). **Flowers:** The crimson flowers have yellow pollen sacs (anthers) and are arranged on stalks in succession along the stem (the oldest flower is usually at the base). They have 4 petal-like segments, hooded tips and are rather thick and fleshy. **Fruit:** *Lomatia tasmanica* is fascinating, as no fruit or seed has ever been found (both in wild specimens and those grown in the botanical gardens). Flowering has been observed to occur around January-February, however not annually. The population appears to be sustained by root suckering and coppice only (Lynch *et al.* 1998). Herbarium specimens have been collected from August to April.

Distribution and Habitat

This species is endemic to Tasmania and is restricted to Southwest Tasmania. Denny King initially recorded *Lomatia tasmanica* in 1934, however the species has not been re-recorded from that site.



Lomatia tasmanica.

Photographs: Royal Tasmanian Botanical Gardens

King continued searching, and rediscovered the species at another site. There is no habitat information for the first locality, however the current population extends over 1.2 kilometres in a single patch of mixed forest (containing eucalypts and rainforest species) in a gully between two creeks. It is suggested that these plants grow in gaps formed by disturbance from tree-fall (Lynch 1991, Lynch 1988, Brown & Gray 1985).

Key Sites and Populations

There is only one extant population of *Lomatia tasmanica*. Several hundred stems occur within this population (estimated at 500). Fossilised leaves of *Lomatia* cf. *tasmanica* were found from Melaleuca Inlet and provide the only other distributional information for this species (Lynch 1991, Lynch *et al.* 1998, TPLUC 1996).

Known Reserves

This species is reserved in the Southwest National Park.

Ecology and Management

Genetic studies (allozyme analysis and chromosome counts) indicate that the 'population' of *Lomatia tasmanica* is a clone and is possibly the oldest known living plant individual at approximately 43 600 years old (Lynch *et al.* 1998).

This species appears to be a triploid, it has 33 chromosomes compared with 22 in the four other *Lomatia* species that have been counted. This chromosome number is consistent with the absence of fruit/seeds (triploid plants are usually sterile), the reliance upon vegetative propagation for survival and the lack of genetic diversity (Lynch *et al.* 1998).

It was postulated that *Lomatia tasmanica* is of hybrid origin, from parents of *Lomatia polymorpha* (growing in the region) and *Lomatia tinctoria* (closest population is 50 kilometres to the east). However, the later is more unlikely due to its distance from the *Lomatia tasmanica* specimens (Lynch *et al.* 1998).

The major threats to this species include the low number of populations (one over 1.2 kilometres) frequent firing and root rot (*Phytophthora cinnamomi*) (TPLUC 1996).

Conservation Status Assessment

There is no immediate need for reassessment of *Lomatia tasmanica*.

Further Information

- Brown, MJ & Gray A 1985, '*Lomatia tasmanica*: a rare endemic plant from South West Tasmania', *Tasmanian Naturalist*, vol.83, pp.1-5.
- Curtis, WM 1967, *The Student's Flora of Tasmania*, Part 3, Government Printer, Hobart.
- Leigh J, Boden, R & Briggs, J 1984, *Extinct and Endangered Plants of Australia*, Macmillan, Melbourne.
- Lynch, J 1991, *Lomatia tasmanica Flora Recovery Plan: Research Plan Phase*, National Parks and Wildlife Service, Endangered Species Program-Project Number 153.
- Lynch, J, Barnes, R, Cambececes, J & Valliancourt, RE 1998, 'Genetic Evidence that *Lomatia tasmanica* (Proteaceae) is an Ancient Clone', *Australian Journal of Botany*, Vol.46, pp.25-33.
- Tasmanian Public Land Use Commission 1996, *Environment & Heritage Report Vol IV, Background Report*, Part C, Tasmanian Commonwealth Regional Forest Agreement, Hobart.

Tasmanian Distribution

There is no distributional information available for this species.

Date last modified: 01/06/2005