

Lomatia *myricoides* River *Lomatia*

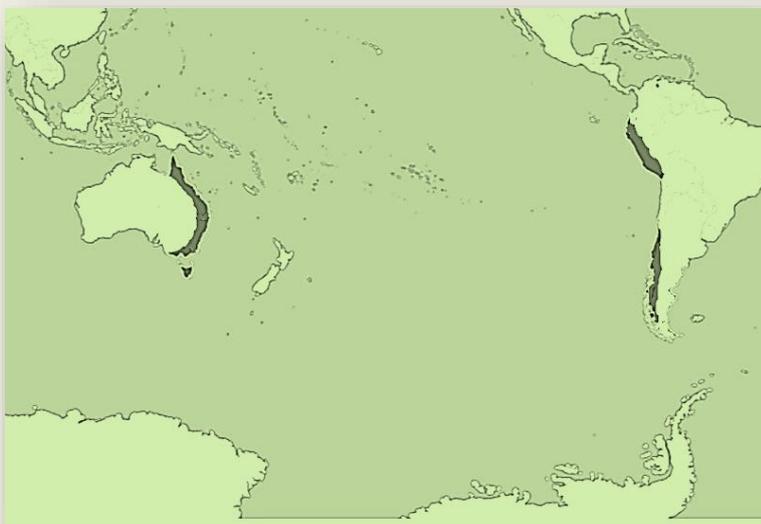


In our Australian bushland, plants with white flowers usually don't rank as highly as those blessed with more brightly coloured blossoms, reds, yellows, pinks, purples and blues. This seems to be the case with *Lomatia myricoides*, a common, low growing shrub

to small tree common along creeks and riverbanks in *Eucalyptus* woodlands and forests in eastern Australia, albeit with lovely tresses of creamy white flowers in late spring and early summer. And yet the biogeography of the genus is quite extraordinary.

There are 12 species of *Lomatia*, all evergreen plants in the Proteaceae, the *Protea* family, which also includes iconic Australian genera such as *Banksia*, *Grevillea*, *Hakea* and *Macadamia*. The distribution of *Lomatia* is described as *Pacific Rim*, with species along the east coast of mainland Australia, Tasmania, and the west

coast of South America. There are six species on the Australian mainland, three in Tasmania, and three in South America (Chile, Argentina and Peru) and fossil records from Patagonia (South America) and Tasmania. *Lomatia*, and all Proteaceae genera for that matter, are part of what is known as the *Antarctic Flora*, a community of vascular plants with origins on the supercontinent *Gondwana*



Lomatia: Distribution map modified from *Plants of the World Online*, Royal Botanic Gardens Kew, <https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:331729-2#publications>



Lomatia tasmanica – King’s Holly – a rare species, critically endangered, from Tasmania.

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its location a carefully guarded secret. King’s Holly is not only unique because of its rarity, but also for its genetics. It’s a *triploid* ($3n$), a plant with three sets of chromosomes, and it’s sterile, so all plants are genetically identical, in other words, clones, with fossil evidence indicating that they may be up to 43,600 years old. So, *all* the clonal individuals of King’s Holly would have originated from one single seed, and the crimson flowers, for which it’s also quite unique as those of other Australian species are creamy-white, don’t produce seeds and reproduction can only occur vegetatively. The plants grow exceptionally slowly, and one stem was dated by dendrochronology at 240 years old, a growth rate of 0.26 mm per year.

Triploids can occur by natural crosses between diploid ($2n$) and tetraploid ($4n$) plants which occur in the same population, but they are characterized by being completely infertile and vegetative reproduction the only way in which they can be propagated.

Don’t think for one minute that the common name, *King’s Holly*, is in any way connected with royalty, it’s another intriguing story in itself. Plants were discovered in 1934 at Cox’s Bight, Port Davey, in southern Tasmania, by Australian tin miner and amateur naturalist

and now distributed on the continents and islands of the Southern Hemisphere, including Africa, South America, New Zealand, New Caledonia and Australia.

Perhaps the most extraordinary of all *Lomatia* species is *Lomatia tasmanica*, King’s Holly, and as the specific name implies, it comes from Tasmania. It’s classified nationally as *Critically Endangered*, and now known from only one colony of ~ 500 to 600 plants in a very small area,



Lomatia silaifolia – Crinkle Bush, or Parsley Fern, is a common sight in woodlands and forests on sandstones in Sydney.

Charles Denison King. In 1965 he sent specimens to the eminent botanist Winifred Curtis at the Tasmanian Herbarium who gave them the name King's Holly, in his honour. Even more remarkably, while tin mining, King alerted the scientific community to plant fossils that he had discovered, and amongst these, palaeobotanist Greg Jordan, from the University of Tasmania, found the fossilised specimens of King's *Lomatia*. How amazing is that, that King discovered both the living *Lomatia tasmanica* and the fossilised!

Atlas of Living Australia, *Lomatia tasmanica*, King's Holly:

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Wikipedia: <https://en.wikipedia.org/wiki/Lomatia>

Wikipedia: https://en.wikipedia.org/wiki/Lomatia_myricoides

Wikipedia: https://en.wikipedia.org/wiki/Lomatia_silatifolia

Wikipedia: https://en.wikipedia.org/wiki/Lomatia_tasmanica

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Lomatia silatifolia resprouting from underground lignotuber after the devastating bushfires of 2019-2020 in the Blue Mountains



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