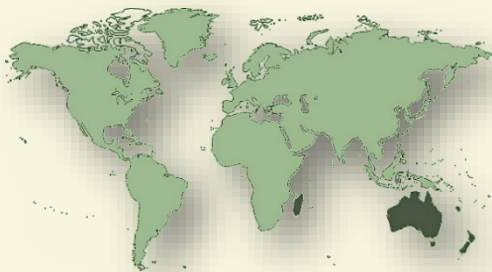


New Zealand Rengarenga *Arthropodium* *cirratum*

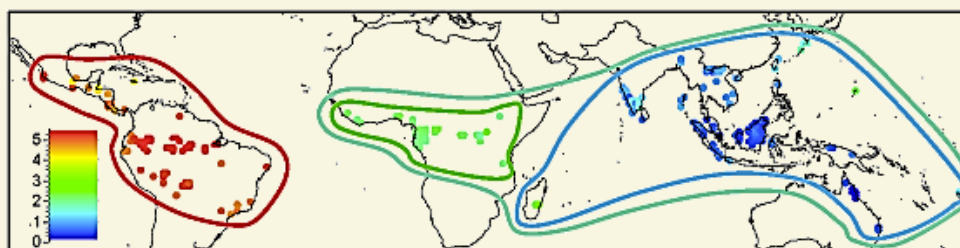


Worldwide there are 18 *Arthropodium* species, 12 of these are Australian endemics, mostly slender native perennials. However, the most flamboyant would have to be Rengarenga, (Renga Lily, or New Zealand Rock Lily), *Arthropodium cirratum*, from New Zealand, of course. This species has become a horticultural favourite around the world, but like the less conspicuous Australian species, *A. milleflorum* and *A. minus* for example, it's also of major importance to the Māori as a food, as medicine and for its use in cultural practices.



New Zealand was colonised about 700 – 800 years ago and many domesticated plants important for food, medicine and fibre were taken there and cultivated by the incoming Pacific Islanders. They experienced difficulties growing many of the species they brought with them, so looked to alternative endemic plant species, including *A. cirratum* with its edible tuberous roots, for food. It is now believed *A. cirratum* originally grew along the coastal areas of the North Island but was later moved to, and cultivated by Māori in more southerly regions.

Arthropodium species belong in the subfamily Lomandroideae of the *Asparagus* family, Asparagaceae; they are found in both the north and south islands of New Zealand, in New Caledonia, Australia but there is one species, *Arthropodium caesioides*, from the distant shores of Madagascar, off the east coast of Africa.



Floristic affinities of tropical tree species demonstrating the close ties between Madagascar and Australia - Asia. From: Slik, F. et al. 2015



What explains the puzzling presence of the one species in Madagascar? In general, related species that are substantially separated from each other geographically are referred to as having a *disjunct distribution*.

The subfamily Lomandroideae had its origins in Australia in the early Eocene, ~52 Ma, and radiation began while Australia, South America and Antarctica were still connected. *Arthropodium* diversified between 16 million to 5 million years ago but this was long after Australia separated from Africa (180 million years ago). Although some Madagascan species can be linked to Africa, in general their origins are more closely tied to Australia - Asia and the ancient flora of Gondwana.



Alison Downing, Brian Atwell, Karen Marais, Kevin Downing and with special thanks to Rob Kooyman

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Some Australian species of *Arthropodium*



Arthropodium minus Photo: Alesjif,
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Arthropodium milleflorum
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Arthropodium strictum (was *Dichopogon strictus*) Photo: Melburnian, CC BY 3.0
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