

Alexanders (*Smyrniolus atrum*): A herb named after Alexander the Great invades New Zealand

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Alexanders (*Smyrniolus atrum*), in the family Apiaceae, is an ancient herb that has been grown since at least Roman times for its edible stems, leaves, and roots. The species has many culinary similarities to celery, but has now largely been replaced by this species and fallen into disuse. The species is native to the Mediterranean, and is now also naturalised in Britain where it is particularly abundant on coastal cliffs (Fig. 1). Alexanders, named after Alexander the Great, is also known as horse parsley, hedge parsley, black lovage, or Macedonian parsley. The botanical name is derived from the myrrh-like smell of the seeds, "smurna" – Greek for "myrrh", its culinary uses, "olus" – Latin for "pot herb", and its large black seeds "atrum" - Latin for "gloomy black".

Similar to other species in the family Apiaceae, such as carrot (*Daucus carota*) and parsnip (*Pastanica sativa*), the plant is a biennial, flowering in its second spring or summer. As it flowers the central stem can elongate to 1-2 m in height, and the plant produces many small umbels 3-5 cm diameter, which have small greenish-yellow flowers. The seeds at maturity are large and shiny-black.

I purchased seeds of alexanders about 8 years ago from Nestlebrae Exotics, a nursery and seed retailer formerly based on Kaipara South Head. The plant grew readily from seed, and became well established in my parent's garden at Takou Bay, about 20 km north of Kerikeri. The plants were cultivated on the edge of a vegetable garden but spread by seed into the understorey of an adjacent 'food forest' of guava (*Psidium guajava*), inga bean (*Inga edulis*), and Surinam cherry (*Eugenia uniflora*). Specimens of the wild plants were collected in 2010 and lodged at the Auckland Museum Herbarium (AK 313519).

In September 2012, I discovered a second naturalised population of alexanders in Archibald Park, Kelston, Auckland (AK 333750). Archibald Park borders an upper estuarine arm of the Waitemata Harbour, and comprises playing fields, with a narrow fringe of exotic forest, revegetation plantings, and exotic vineland and herbfield along the shoreline. Alexanders was present as several flowering plants (Fig. 2) and hundreds of recently germinated seedlings in an unkempt corner at the northern end of the reserve. There were no signs of recent cultivation at the site, the vegetation predominantly being rampant growth of garden nasturtium (*Tropaeolum majus*), pie melon (*Citrillus lanatus*), and tradescantia (*Tradescantia fluminensis*), with scattered mature coral trees (flame tree; *Erythrina*

×sykesii). The presence of species that typically establish from dumped garden waste, such as fruit salad plant (*Monstera deliciosa*) and jasmine (*Jasminum polyanthum*), suggests that alexanders may first have established here following the dumping of fruit-bearing adults from an adjacent garden.

These two collections are the only wild New Zealand specimens of alexanders held at the Auckland Museum (AK), CHR, or WELT herbaria. The species is not included in the *Flora of New Zealand Volume IV* (Webb *et al.* 1988) and appears to be a new addition to our naturalised flora. However, the species is likely to have naturalised at other locations where it has been currently overlooked. Based on herbarium specimens it has been cultivated in New Zealand for at least 30 years: *G. Painter*, AK 180521 (dupl. in WELT), October 1981, west Auckland, cultivated.



Fig. 1. Alexanders abundantly in flower, Cornwall coast, England. Photo: Ewen Cameron, 23 Apr 2011.

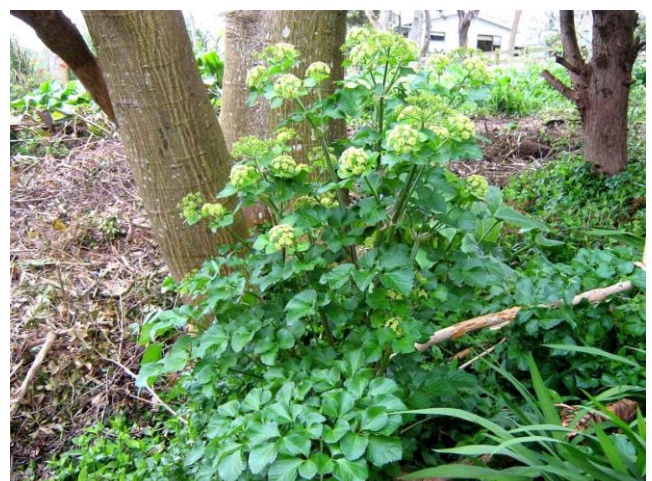


Fig. 2. Alexanders growing wild at Archibald Park, Kelston, Auckland. Photo: Tim Martin, 19 Sep 2012.

Searching the internet for current New Zealand sources of alexanders seed, I discovered a herbal products company called 'The Herb Farm', based in Manawatu, that featured this species as its "Plant of the Week" in August 2006 (The Herb Farm 2006). The article noted that alexanders had "established itself beautifully under trees in our woodland areas".

The distribution of alexanders, which includes much colder climates such as Britain, indicates that

alexanders may be naturalised more widely in southern New Zealand, or at least have the potential to do so with further distribution and cultivation as a culinary herb.

Acknowledgements

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References

- The Herb Farm 2006: http://www.eplants.co.nz/what_to_do/herb_newsletters/Herb_news/index_aug25_06.htm. Accessed 23 Sep 2012.
Webb, C.J., Sykes, W.R., Garnock-Jones, P.J. 1988: *Flora of New Zealand Volume IV. Naturalised Pteridophytes, Gymnosperms, Dicotyledons*. Christchurch, DSIR.
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The flowering and fruiting of elephant-ear taro (*Alocasia brisbanensis*, Araceae) in Auckland

Rhys Gardner

Introduction

For a few years now I have been gardening with this large Australian aroid, enjoying in particular the delicious scent of its summer-long flowering. Visitors though have suggested that this plant is really a "space invader poised to take off" and become as much of a weed as its relative, *Zantedeschia aethiopica* (arum lily). All I have been able say in defence is that currently it seems to be spreading only by detached pieces of rhizome (admittedly, such new colonies can be vast, as along the Waikato River near Puni).

To learn more I have experimented on two *alocasia* colonies, one at Sandringham and the other at Green Bay (possibly these represent the same clone). In this I have been guided by the research of plant pathologist Dorothy Shaw (see Johnson et al. 2008) who in her retirement in Brisbane focussed on the plant's reproductive biology and its interactions with various Australian animals. Until its endemic status was realized it featured in her writings as the Indo-Pacific food-plant *A. macrorrhizos* (Hay & Wise 1991).

Flowering (Fig. 1)

Bown (1988) gives a popular but thorough survey of the family's floral biology. The morphology and periodicity of flowering of *A. brisbanensis* was discussed more technically by Shaw & Cantrell (1983) and Shaw (2004). My own observations on the Auckland plantings more or less agree with the latter

two accounts (making some allowance for climatic differences), and can be summarized as follows:

— Flowering begins in early November and ends in March (or even late April if the weather is warm enough, as in 2012). If the stem is a well-positioned one (full sun, plenty of water) it produces c. 7–9 inflorescences over this time. There is no overlap in the flowering of successive inflorescences on the one stem; typically, at mid-season, a new inflorescence opens several days after the male phase of the previous one is over.

— The first phase of flowering is a female one: the base of the spathal limb (the flared part of the spathe) is open, that is, there is a gap of nearly 5 mm between it and the central sterile zone of the spadix, with the female flowers down in the spathal chamber exposed to pollen brought in by wind or insects.

— After 3–4 days the base of the spathal limb contracts to close the gap at the sterile zone, and pollen begins to be extruded from the male flowers. The pollen grains, white and minutely spinulose, tend to cohere, and Shaw and Cantrell (1983) aptly describe these extrusions of pollen as "cirri". The female flowers at this stage gradually become covered in a milky fluid. The spathal limb begins to change from green to yellow and starts to wilt, and the scent, which has been so intense up to now, fades as well. (My experiments on excised portions