

natural forest areas, particularly in the volcanic rock forests, e.g. see Cameron (2018) – obviously well adapted to the local habitat. Not only did street titoki survive, they also fruited abundantly during this period of drought, unlike I've ever seen before. Large bunches of capsules were common on most trees (Fig. 6), from May to at least late September when a small amount of fruit was still present. The fruiting was most obvious on the footpaths underneath the trees, which were abundantly covered with: pieces of brown capsules (the 'lids'), jet-black seeds and scarlet arils (Fig. 7), the latter readily sought-after by blackbirds. Under many trees in June the footpath was scarlet with arils and the capsules crunched as you walked under the trees. Moore & Irwin (1978: 92) mentioned Māori valuing the crushed titoki oil which was usually reserved for the chiefly caste, and "occasionally there would be a summer when the berries of the titoki were more plentiful than usual, and there was enough for commoners also". Well, 2020 was a year for the commoners, but the peak fruiting was more May–June than summer – were the trees confused by the long drought and had an early/late second flowering?

See Gardner (2008, 2013) for the sexual expression of Auckland's titoki street trees which he found to be roughly 1:1 – fruiting trees to non-fruiting trees (i.e. male). Unfortunately, I failed to record the number fruiting to non-fruiting, but my impression was that some 75% of the trees were fruiting to some degree.

Congratulations to Auckland Council for abundantly planting titoki as street trees – a great choice, virtually maintenance-free, and with many other favourable characteristics (Wilcox 2012, p. 89). Drought-tolerance needs to be a requirement for future street plantings, and there also needs to be a budget for watering recent plantings during future droughts which are likely to become more frequent. It was disappointing to see so many relatively recent Council plantings perish during the recent big drought – we can do better. For starters, no more kāpuka; use puka (*Griselinia lucida*) instead.

Acknowledgements

Thank you to Cheryl Taylor for company on our daily lockdown walks, to Rhys for comments, and to Yumiko Baba for Figure 2.

References

- Cameron, E.K. 2018: Mt Eden/Maungawhau urban rock-forests revisited. *Auckland Botanical Society Journal* 73: 102–112.
 Gardner, R.O. 2008: Sex in the city: flowers and fruit of titoki (*Alectryon excelsus*, Sapindaceae). *Auckland Botanical Society Journal* 63: 32–33.
 Gardner, R.O. 2013: Titoki (*Alectryon excelsus*, Sapindaceae) revisited. *Auckland Botanical Society Journal* 68: 95–96.
 Moore, L.B.; Irwin, J.B. 1978: *The Oxford book of New Zealand plants*. Oxford University Press, Wellington. 234p.
 Wilcox, M.D. 2012: Auckland's remarkable urban forest. *Auckland Botanical Society Bulletin* 29. 347p.

Lichenising (botanizing) during the lockdown

Dan Blanchon

The lockdown was a bit of a challenge for us – we started renovations to our house two weeks before Alert Level 4, and due to a complete lack of internal walls and plumbing we were exiled to a small Airbnb apartment in Mt Eden for the duration. The upside of this was our proximity to Maungawhau for our daily walks. On one of these walks we were pleasantly surprised to stumble across a small population of *Cladia blanchonii* on rocks half way to the summit (Fig. 1). This species (a coral lichen) was segregated from *Cladia aggregata* (no longer recognized as being found in New Zealand) by Parmen et al. (2013) and Sittiporn Parmen and Thorsten Lumbsch kindly named it after me. Despite extensive surveys for *Cladia blanchonii*, very few populations are known in New Zealand and it seems to be genuinely

rare here (it is also found in Tasmania and SE Australia). Collections of *Cladia* from the upper North Island are more likely to be *Cladia gorgonea* (on rocks) or *Cladia inflata* (on soil below trees or on tree fern bases in forest). Two small populations are known from the Waitakere Ranges; others recorded are Ngaio (now gone), Mt Kaukau, Matiu-Somes Island, Ngakawau, and the Catlins River, and the largest populations are known from the Chatham Islands (Peter de Lange *pers. comm.*). On the mainland the species seems to favour rocky sites that are dry in summer, but where fog, sea mist or low cloud provide ample moisture in winter. On the Chatham Islands the species prefers open skeletal soils and saprolite in places often subjected to salt blast (Peter de Lange *pers. comm.*).

Due to the small number and size of populations, and loss of at least one population, *Cladia blanchonii* was listed as 'Nationally Vulnerable' by de Lange et al. (2018). In Auckland, the apparent stronghold (and Type locality) for the species is the Unitec campus in Mt Albert, where it can be found on basalt outcrops near waterways. Unfortunately, most of the habitat (including the type locality) occupied by *C. blanchonii* at this site has or will be acquired by the Crown and is to be cleared for intensive housing and landscaping. Finding a second population in the Auckland Isthmus is therefore somewhat of a partial relief, particularly being found in a relatively protected area. It would be useful to properly survey Maungawhau, as at least one other population has been subsequently found by local lichenologist Marley Ford nearby.



Fig. 1. *Cladia blanchonii* on basalt boulder, Maungawhau. Photo: D. Blanchon, 4 April 20.

References

- de Lange, P.; Blanchon, D.; Knight, A.; Elix, J.; Lücking, R.; Frogley, K.; Harris, A.; Cooper, J.; Rolfe, J. 2018: *Conservation status of New Zealand indigenous lichens and lichenicolous fungi*, 2018: New Zealand Threat Classification Series 27. Department of Conservation, Wellington. 64 p.
- Parnmen, S., Leavitt, S. D., Rangsiruji, A. & Lumbsch, H. T. 2013: Identification of species in the *Cladia aggregata* group using DNA barcoding (Ascomycota: Lecanorales). *Phytotaxa* 115: 1–14.

The world's tallest palm and tallest monocot: Andean wax palm (*Ceroxylon quindiuense*) in Auckland

Ewen K. Cameron

The palm genus *Ceroxylon* contains 12 dioecious species all from the Andes. They have wax on their trunks formerly used for candles, wax matches, gramophone records; and their leaves were over-exploited for Christian Palm Sunday ceremonies (Sanín & Galeano 2011, Mabberley 2017). The genus contains two world palm records, *C. quindiuense* as the tallest palm (and hence the tallest monocot), and *C. utile* occurring at the highest elevation of any palm, at over 4000 m in Colombia (Uhl & Dransfield 1987). Corner (1966: 92) commented that *Ceroxylon* palms with their tall trunks at high altitude "...bears the crown far above the dwarfed dicotyledonous vegetation...". There are some amazing images of them in the wild - see the *Palmpedia* website.

Some 20 years ago the retired DSIR regional Auckland botanist, Alan Esler (1929–2016), showed me a large, at that stage, trunkless, palm that he had planted in his front garden at 7 Stilwell Road, Mt Albert, Auckland City. It was native to South America and there was a peg in the ground with its name,

but I was focused on other plants in his garden at the time and failed to record it or even collect a piece of frond for the herbarium. I remember the large, stiffly erect pinnate fronds which were dark green above and silver-white underneath (at a rather similar stage to a current pictured *Ceroxylon* in Northland, Fig. 1). Recently, driving past the ex-Esler property I couldn't help but notice how the palm had shot up, with a thick, white trunk now over 8 m tall, with stiff semi-erect fronds c.4 m long (sheath excluded) (Figs. 2–4). After admiring the Esler palm I drove around the corner and there at 36 Allendale Road was another one of a similar size – both are clearly visible on *Google Maps* (street view).

Earlier in the year when Cheryl and I enjoyed our daily Covid-19 lockdown neighbourhood walks around Mt Eden/Balmoral/Sandringham, the diversity and number of the planted palms in our area impressed and surprised me – not to mention the other currently fashionable plantings of *Magnolia* species and their numerous cultivars. However, the