

Clianthus, veiled in mystery

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Introduction

The Royal New Zealand Institute of Horticulture made the award of the Peter Skellerup Plant Conservation Scholarship and Medal in support of the research we are conducting on genetic diversity in *Clianthus*. Efforts have been further advanced by support from the Public Good Science Fund through a subcontract to Crop & Food Research under the Native Ornamental Plants programme. The more we discover of the remaining *Clianthus* diversity, the more we and others want to know about the cultivation of this plant when the early European botanists arrived, and in the preceding centuries. Yet, this cultural information appears only sparingly in the literature, and would appear to have been lost from the collective memory. As an introduction to our work, I will briefly review the diversity of *Clianthus* and its cultivation as seen by early European observers.

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Colenso's fascination

William Colenso read his talk entitled 'On *Clianthus puniceus* Sol.' to the Hawke's Bay Philosophical Institute on 14 December 1885. Described and given the name *Clianthus puniceus* by Daniel Solander, the plant locally known as kowhai ngutukaka or kaka beak had fascinated Colenso since his first encounter with it 50 years earlier in the Bay of Islands. This species had an unusual distribution, occurring around and about sites of Maori habitation, while being comparative rare in the wild. This fascination gained extra impetus when Colenso later moved to live in Hawke's Bay where he noticed and

described a second species, *Clianthus maximus*.

Diversity in *Clianthus*

Colenso recognised *Clianthus puniceus* as a 'truly handsome' plant, but one that was remarkable for its variety as well as for its beauty. While we have a range of *Clianthus* cultivars available to us, Colenso was talking about the variety he observed in the wild. As to the morphological diversity within *Clianthus*, Colenso hints that the plants associated with Maori villages on the Hick's Bay-Poverty Bay coast between 1838-1843 were the same or similar to those with which he was very familiar growing in Northland. However, when he moved further south to live permanently in Hawke's Bay in 1844, he grew *Clianthus* from a local source in his garden, and was surprised to see how much it differed from the Northland plants. *Clianthus* plants of this new form were also to be found growing in other parts of Hawke's Bay.

Specimens were sent to Kew in the 1840s, but Hooker "could not detect any material difference" between the two forms. In 1885, Colenso spoke of the differences between the Northern and the Southern *Clianthus*. He said he was not concerned as to whether or not these were different forms of *Clianthus puniceus*, or different enough to be classified as distinct species. However, he bluntly stated that "the two forms exist". After a little over 100 years, in which the two forms had languished as *C. puniceus* var. *puniceus*, and *C. puniceus* var. *maximus*, these have been recognised by Peter Heenan of Landcare Research as the distinct species *C. puniceus* (G. Don) Sol. ex Lindl. and *C. maximus* Colenso.

Cultivation of *Clianthus*: to eat or for ornament?

The genus *Clianthus* was described as being veiled in mystery by Colenso because, unlike other native species,



Clianthus maximus, with flowers from two or more inflorescences at various stages of opening against the glossy, dark green leaves

he believed that he had never seen it growing commonly and truly in the wild. Possible exceptions were on a few, small islands in the Bay of Islands. Although botanical specimens were first collected by Solander and Banks in 1769, the plant was probably not seen by other eminent collectors during later expeditions. In fact, Colenso speculated that had it not been for the efforts of European botanists and gardeners working within New Zealand and "at Home", the plant would have become extinct by the time he gave his talk in 1885.

However, this plant managed to survive the centuries before European gardeners were on hand, as he saw it, to rescue this plant from extinction. This suggests that, although *Clianthus* might have been rare in the wild, it had long been successfully cultivated by Maori before it was catalogued by Banks and Solander. Therefore, Colenso saw *Clianthus* as

belonging to the suite of horticultural crops grown by Maori, which he named as various sorts of taro (*Colocasia*) and kumara (*Ipomaea chrysorrhiza*), the paper mulberry (*Broussonetia papyrifera*), the striped New Zealand flax (*Phormium colensoi*), and the tipara or broad-leaved cabbage tree (*Cordyline sp.*). The gardening of these and other crops, e.g. gourd (*Lagenaria siceraria*) and yam (*Dioscorea elata*), before and during the time of early European settlement is described in great detail by Helen Leach (1984), although there is no mention of *Clianthus* in the catalogue of crops.

Until recently, I had regarded the cultivation of *Clianthus* as having a cultural significance of which I was unaware. Taylor (1855) commented that *Clianthus* flowers were worn as adornments, suggesting a purely ornamental use. While this might well have been the case, a thread of anecdotal evidence suggests that *Clianthus* was cultivated as a food plant, the green pods being eaten as if they were snow peas. Any information readers might like to pass on to do with the cultivation of *Clianthus*, whether for ornament, food or some other purpose, would be most welcome.

Conclusion

We have discovered a pattern to the distribution of the different genotypes within the species *C. maximus* in the East Cape to Hawke's Bay area, and a link between these genotypes and the sole survivors of the once widespread *C. puniceus*. We will report on these findings in the near future. In the meantime, we would like to hear about traditional kowhai ngutukaka cultivation methods and uses.

Acknowledgement

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References

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- Heenan PB (2000). *Clianthus* (Fabaceae) in New Zealand: a reappraisal of Colenso's taxonomy. *New Zealand Journal of Botany* 38, 361-371.
- Leach H (1984). *A thousand years of gardening in New Zealand*. Reed: Wellington.
- Taylor R (1855). *Te Ika a Maui. New Zealand and its inhabitants*. Wertheim and Macintosh: London.

A chronology of kaka beak naming, based on the descriptions of Colenso (1885) and Heenan (2000)

1769

First specimens collected by Solander and Banks and referred to as *Clianthus puniceus*

1832

Using the herbarium specimens of Solander and Banks, George Don renames the plant after his father (also George Don): *Donia punicea* G. Don

1835

Publication of Dr Lindley's restoration of the name *Clianthus puniceus*

1844

William Colenso moves to Hawke's Bay, discovers a different *Clianthus* species and refers to it as *C. maximus*

1847

Colenso supplies specimens of the possible new species to Sir WJ Hooker at Kew, whose team examines the specimens to hand and finds no material difference between the two forms

1899

Kirk in his *Students' flora of New Zealand*, reduces *C. maximus* to a variety of *C. puniceus*

2000

In a reappraisal of Colenso's taxonomy, Peter Heenan (Landcare Research, Lincoln) reinstates *Clianthus maximus* Colenso to species rank, alongside *Clianthus puniceus* (G. Don) Sol. ex Lindl.

