

THE HOLES IN THE LEAVES OF KAWAKAWA (MACROPIPER EXCELSUM)

R.E. Beever

That plant which always has holes in its leaves? Why of course you mean kawakawa (Macropiper excelsum). While the presence of holes is a useful diagnostic character, you won't find this feature mentioned in the standard floras. Unlike leaves of the fruit salad plant, Monstera deliciosa, the holes in kawakawa leaves are not a normal developmental feature but are caused by a looper caterpillar, the larva of the geometrid moth Cleora scriptaria (Walker), and are thus not considered worthy of mention. (Perhaps times will change. In a recent issue of the journal Taxon [32:106-107, 1983], M. Condon and M. D. Whalen make a plea for the collection and documentation of damaged leaves pointing out that they provide information on the distribution of herbivores, and are a valuable resource for those interested in the interactions between plants and their hosts. Herbarium keepers beware!)

The large-leaved variety of kawakawa, referred to as var. majus by H. H. Allan in Vol. 1 of the Flora but more correctly called var. psittacorum or if one follows A. C. Smith forma psittacorum, is restricted to Norfolk, the Kermadecs, and some of the northern offshore islands. It does not grow naturally anywhere on the mainland but a form of it is widely cultivated for its elegant large glossy leaves which lack the brownish-purple petioles characteristic of the mainland variety.

Occasionally I have heard it suggested that the large-leaved variety does not get attacked by C. scriptaria a feature which, if true, would enhance its use as an ornamental shrub. Unfortunately for the gardening enthusiast the suggestion is incorrect. For some years I have been growing kawakawa plants from a range of locations and the moth has become well established on all of them. Fig. 1 shows the damage caused to selected leaves. Plants from the islands of Aorangi, Raoul, Burgess, and Mayor can all be placed in var. psittacorum, although they show subtle differences from each other. The Little Barrier Island, East Cape and Muriwai plants fall into var. excelsum. All plants show leaf damage whatever their origin. Leaves from Raoul plants were particularly affected, in many instances the lamina being reduced to a few tattered scraps.

What then is the origin of the suggestion that the large-leaved kawakawa is resistant to C. scriptaria? I suspect it has arisen because the moth typically lives in forest communities, the caterpillar feeding on kawakawa and other plants including Aristolelia serrata, Coriaria arborea, Lophomyrtus bullata, Pennantia corymbosa, Pseudowintera sp., and Sophora microphylla. It probably takes some time for it to seek out and attack each new kawakawa plant in cultivation, especially if the gardener makes use of insecticides. And, because of its novelty value and large glossy leaves, var. psittacorum (and I suspect usually the Poor Knights plant) is the kawakawa most often chosen for cultivation.

ACKNOWLEDGEMENT

I thank Mr J. S. Dugdale for identifying the larvae of C. scriptaria, which were common on the cultivated plants. I am grateful to Mr A. E.

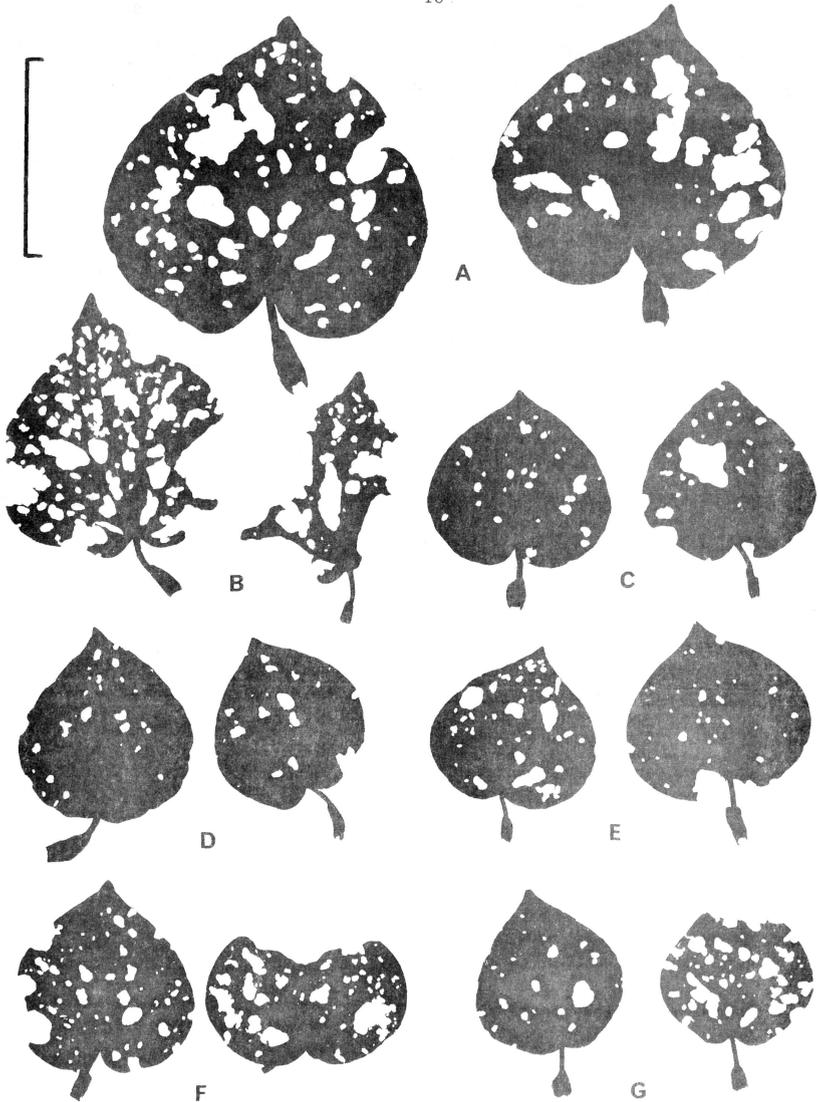


FIG. 1

Leaves from kawakawa plants growing in cultivation. (a) Aorangi (Poor Knights group); (b) Raoul (Kermadec group); (c) Burgess (Mokohinau group); (d) Mayor Island; (e) Little Barrier Island; (f) East Cape; (g) Muriwai (west of Auckland city). Scale line 100mm.

Wright for accepting voucher specimens of the affected plants for the AK herbarium (AK 175072/86).

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TWO NEW SITES FOR POMADERRIS POLIFOLIA

Maureen Young

During March 1986, while on a school trip to view some of the kauri gum pits that still abound in the peaty scrublands at Mangawhai, I idly turned over a branch of a shrub that was growing on the edge of one of the pits. I had presumed that the plant was Pomaderris ericifolia, but was surprised to note that the leaves were larger, the margins less recurved, and the tomentose undersurface more clearly visible than expected.

On taking a sample to Lucy Moore she confirmed what I suspected -- that it was Pomaderris polifolia. P. polifolia has so far been recorded from very few localities -- Spirits Bay, Te Kao, David I. in the Hauraki Gulf, and Silverdale.

I was instructed to return in the spring to get a flowering sample. This I did on 23 October. The flowers are similar to P. ericifolia, though maybe they are a little larger. The difference in size is more noticeable with the buds -- the buds of P. polifolia being larger, paler cream spheres than those of P. ericifolia. When viewed from above the foliage has a softer, brighter green appearance, and the shrub may grow to c. 1.5 metres in height, compared with c. 1 metre for P. ericifolia. The leaves are larger and more "open" on seedlings and on plants growing in shaded situations.

A few days later (Labour Weekend), while having a "cuppa" on the side of the road in the Waipoua pine forest, I was surprised to come across P. polifolia once more. This second sighting in the space of a few days leads me to wonder whether perhaps P. polifolia is not so much uncommon as unnoticed.

Specimens from both areas will be lodged with the Auckland Institute and Museum.

I have followed Audrey Eagle in treating these two as species, rather than as varieties of P. phyllicifolia as in "Flora of New Zealand, Vol.1, Allan.

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