

Is the variety densifolia of Forstera bidwillii on Egmont really different from the typical form of Tongariro? It could be a habitat form. So far plants have proved rather difficult to keep in cultivation. I'll keep on trying!

And so one could go on. There are still many hundreds of such "problem" plants in the New Zealand flora as a whole. As soon as one problem is "solved" to one's satisfaction, even temporarily, another one appears to take its place. I thought Calystegia soldanella was a "clear-cut" species till I started growing some plants from Cape Egmont. They varied considerably, as a result I think of crossing with a pink-flowered (indigenous?) form of C. sepium.

We may approach "finality", "the truth", whatever you like to call it, but make no mistake we never get there!

If anyone wishes to obtain a copy of the "Check List" please write to:
Botany Division Substation, Soil Bureau, D.S.I.R., Private Bag, Lower Hutt.

A FORM OF "FLOWERING" IN METROSIDEROS EXCELSA SEEDLINGS

A.J. DAKIN

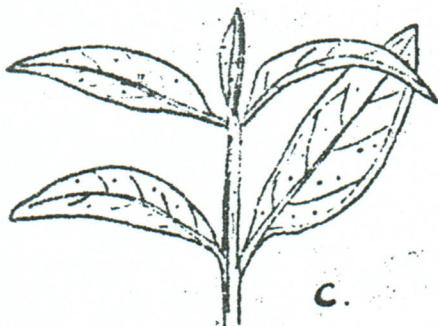
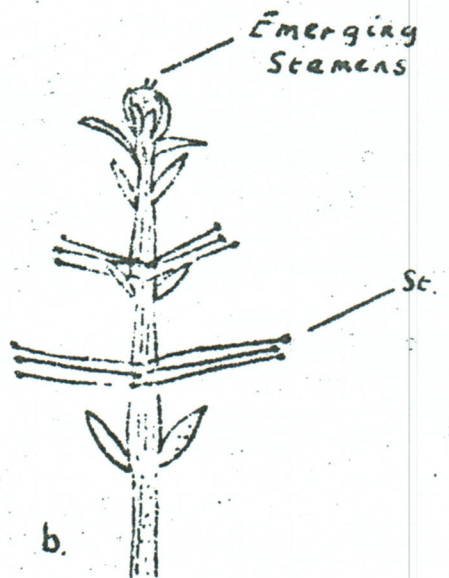
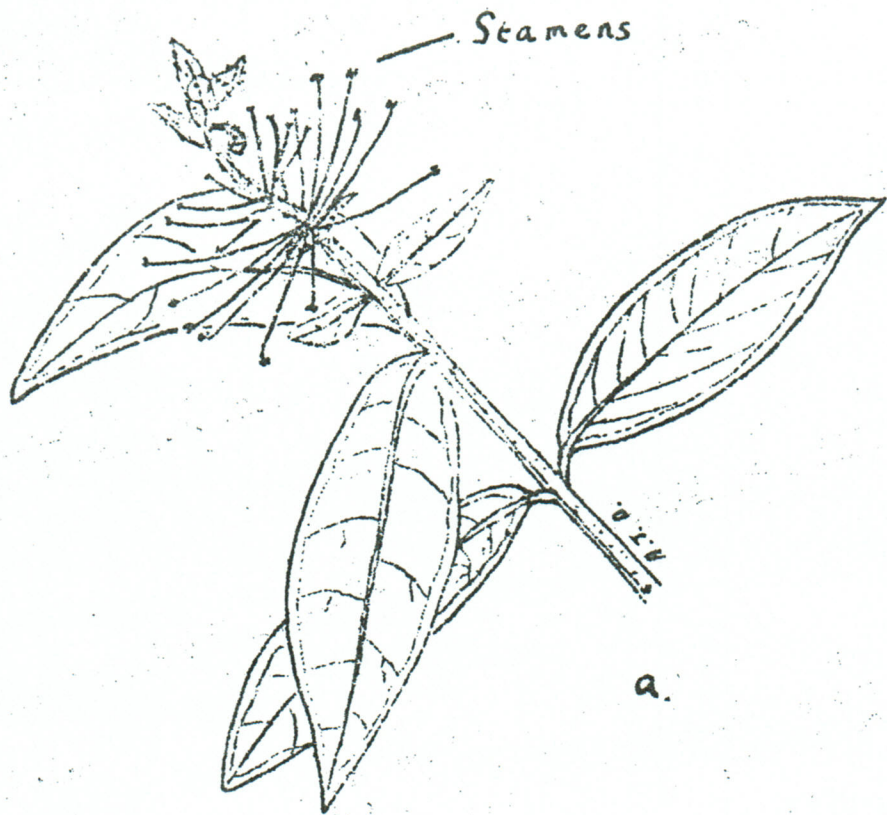
Recently observed at Hunua nursery was an odd form of "flowering" in a batch of pohutukawa (Metrosideros excelsa) seedlings. These were raised from seed sown in June 1973, seed being collected from a tree at Cosseys Dam, Hunua Ranges.

Germination took 15 days under unheated glasshouse conditions, and seedlings have been continuously under glass since sowing. All have grown on in the same conditions of temperature, light, container and growing medium.

The plants are now 20 - 22 cm. high (on average) and out of 648 seedlings resulting from germination, 42 or 6.4% have developed the unusual flower phenomenon described.

In the diagram (a) shows a typical stem apex showing the position of stamens which have grown out in two whorls around the stem. This occurs above the last set of "normal" leaves, these being smaller than others further down the stem.

Filaments of stamens are bright red in colour, stamen length is about 10 - 20 mm. in the plant examined, anthers are well formed, and some appear to contain pollen masses. No pistil was evident.



Metrosideros excelsa

Seedling - Hunua Nursery.

Scale: Natural size in A & C.

3/74

Leaves and stems in the region of stamens are covered with dense white pubescence, this in marked contrast to the almost glabrous stems and leaves below.

Drawing (b) is a somewhat diagrammatic sketch to show position of "stem" stamens and also bract-like, small leaves. The bud with its many enveloping bracts can be seen with some further emerging stamens, which would form another whorl. Most of the small leaves around the bud do not appear to be persistent and many fall soon after unfolding.

Stamens were not so well developed in all plants examined and in many, stamens were in tight clusters and tangled together, also they were not particularly well attached to the stem and often fell with a knock or by touch. However, on some plants they persisted for up to 4 - 6 weeks.

At the time of writing (March 1974) many of the stamens have now fallen and on several plants growth has returned to normal, by production of glabrous leaves above the "flowering" section.

Drawing (c) has been included to show a normal seedling leaf bud, almost glabrous save for a few minute hairs on the midrib of the bud.

What has caused this unusual condition in plants which were only 6 to 9 months old? Possibly higher than usual temperatures this season under glass had some effect. The following brief table gives temperatures in the glasshouse compared with those outside for November to February. These temperatures are certainly above average compared with our past records for Hunua.

		<u>GLASSHOUSE</u>			
		<u>NOV</u>	<u>DEC</u>	<u>JAN</u>	<u>FEB</u>
AV. MAXIMUM	° C	25.1	26.9	27.9	28.3
AV. MINIMUM	° C	14.5	14.1	14.7	16.9
		<u>OUTSIDE (SCREEN)</u>			
AV. MAXIMUM	° C	20.9	23.6	25.5	28.0
AV. MINIMUM	° C	12.0	11.1	11.8	15.5

I would certainly be interested to know if this has been noted before in regard to pohutukawa, and also of any explanations for the condition.

Mr Brian McClure, Nurseryman at Hunua, supplied information on seedling numbers and germination data for inclusion in this short note.