

SOME NOTES ON VARIATION OF LEAF CHARACTERS IN ARISTOTELIA SERRATA

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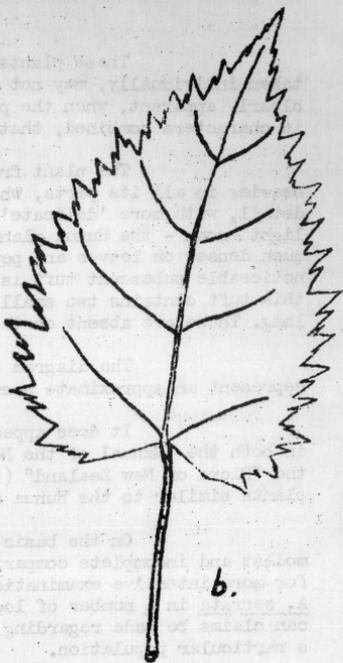
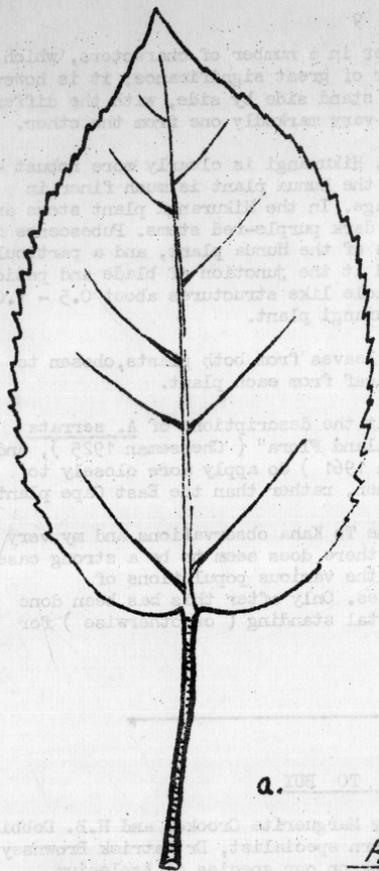
In the last edition of the Newsletter an article by R.E. & J.E. Beever discussed a larger leaf form of *A. serrata* from Te Kaha, East Cape. This prompted me to re-examine a plant which I collected in February 1972 on the lower slopes of Mt. Hikurangi, East Cape. This plant was raised from a cutting and has been growing in our shadehouse for two years.

In the following table some leaf characters are compared between the 'Hikurangi' plant and one from the Hunua Ranges which has also been in the shadehouse over the past two years. Plants are now about 70 - 80 cm in height.

Leaf measurements are based on 10 leaves chosen to cover the range of sizes present - only fully formed leaves were selected.

TABLE
Comparison of Leaf Characters

Character	Mt. Hikurangi		Hunua Ranges	
	Mean	Range	Mean	Range
petiole length (cm)	4.5	2.4 - 6.2	5.1	3.4 - 7.4
lamina length (cm)	12.1	8.7 - 16.3	9.8	7.2 - 14.1
lamina width (cm)	7.4	5.5 - 10.3	6.3	4.2 - 9.3
petiole diameter (mm) (at mid-point)	2.0	1.5 - 3.0	1.4	1.0 - 2.0
lamina apex	acute - acuminate		acuminate	
lamina base	shallow cordate		cordate?	
lamina margin	shallow double serrate		coarsely double serrate to incised	
lamina shape	ovate		deltoid - ovate	
lamina texture	firm coriaceous		thin - membranous	
lamina colour (underside)	pale green, tinge of pink, veins distinctly red-pink		red-purple to reddish green	



a.

b.

Aristotelia serrata.

Leaves from Mt. Hikurangi
(a) region and Hunua Ranges.

Natural Size

These plants differ in a number of characters, which, if taken individually, may not appear of great significance; it is however clearly apparent, when the plants stand side by side, with the differences in characters combined, that they vary markedly one from the other.

The plant from Mt. Hikurangi is clearly more robust - heavier in all its parts, whereas the Hunua plant is much finer in detail, with more 'delicate' foliage. In the Hikurangi plant stems are light brown - the Hunua plant has dark purple-red stems. Pubescence is much denser on leaves and petioles of the Hunua plant, and a particularly noticeable pubescent tuft is sited at the junction of blade and petiole; this tuft contains two small denticle like structures about 0.5 - 1.0 mm long. These are absent on the Hikurangi plant.

The diagram shows leaves from both plants, chosen to represent an approximate average leaf from each plant.

It does appear that the descriptions of A. serrata in both the "Manual of the New Zealand Flora" (Cheeseman 1925), and the "Flora of New Zealand" (Allan 1961) do apply more closely to plants similar to the Hunua specimen, rather than the East Cape plants.

On the basis of the Te Kaha observations and my very modest and incomplete comparison, there does seem to be a strong case for more intensive examination of the various populations of A. serrata in a number of localities. Only after this has been done can claims be made regarding varietal standing (or otherwise) for a particular population.

WANTED TO BUY

A copy of ' New Zealand Ferns ', by Marguerite Crookes and H.B. Dobbie, 6th. edition, 1963, for visiting fern specialist, Dr Patrick Brownsey, in New Zealand for two years to work on our species of Asplenium.

Please contact Dr Ross Beever, phone 861-059 (work) or 654-615 (home).
