

or few flowered cymes growing from the axil of the leaves.

The second type, apparently taking after its P. betulinus parent, is a compound inflorescence, one that is smaller than those usually seen on P. betulinus, more compact, and is found on the tips of the branchlets. A number of such inflorescences, in bud, were well developed in early June this year. The inflorescences are staminate.

I am informed that the compounding of this inflorescence at the branch tips is the result of an attack by the fungus "Witches Broom". It is an interesting coincidence that this fungus can so change the inflorescence that it acquires similar characteristics to those of its other parent.

Until recently these were the only specimens of "cymosus" I had seen. At the conclusion of the Society's trip to Okuku Pass I accompanied our President to the Homestead to thank the owner for allowing us to wander on his land. I was delighted to see growing near his garage a healthy specimen of what appeared in the dusk to be P. "cymosus". I am looking forward to inspecting this tree during the flowering season though we were informed the owners had not seen flowers on it.

SOLANUM IN CANTERBURY

by M.J.A. Bulfin

Two New Zealand species of Solanum, S. aviculare and S. laciniatum are being grown extensively in parts of Europe as a crop plant for the production of the alkaloid solasodine used in the manufacture of cortisone. Representatives of drug houses from Switzerland and Hungary have come to New Zealand in recent years to see plants growing in a natural environment and to collect seeds from a range of habitats.

The alkaloid is present in all parts of the plant with the highest concentration in the unripe fruit. Solanum aviculare has a higher percentage of solasodine per unit of dry weight than S. laciniatum but the latter produces a greater quantity of leaves and stems per plant. In the places where these Solanums are grown commercially in Europe the fruit does not develop fully, possibly, because of a shorter day length or because of lower temperatures, and the plant is grown as an annual and cut several times during the season.

Plants growing at the southern limit of the species are therefore of great interest and the Botany Division would be pleased to have any records of S. aviculare from Canterbury and of S. laciniatum from higher altitudes.

Allan gives the distribution of S. aviculare as Kermadecs, Three Kings, North Is., South Is., Chatham Is., "coastal and lowland forest margins and shrubland to Marlborough Sounds and Karamea Coast" and the variety albiflorum as far south as Kaikoura. Now the species is known from the coast just north of Kaikoura, from Goose Bay, Gore Bay and more recently from localities on Banks Peninsula in both Lyttelton and Akaroa Harbours.

S. laciniatum has a similar distribution but does not extend so far to the north and is present further to the south to near Dunedin. We have one record from c. 1500' on Mt Peel.

What we used to call S. aviculare is now divided into the two species. Some distinguishing features are:-

	S. laciniatum	S. aviculare
flowers	dark blue-purple, up to 5cm diam.; corolla lobes indistinct, notched at the tip.	lavender, usually paling to the margins, or white, up to 3.5cm diam.; corolla lobes distinct, and rather pointed.
fruit	ripens to a pale lemon yellow, larger and longer than <u>S. aviculare</u> .	ripens to a bright orange often with a persistent green cross at the base. Roundish in shape.
seed	larger than 2mm long.	smaller than 2mm long.
stone cells in fruit	as large or larger than seed and very numerous	generally smaller than seed.

If you know of any additional localities, could you send them, with specimens if possible, to

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Refs: ALLAN, H.H. Flora of New Zealand, Vol. I. 1961
 BAYLIS, G.T.S. Chromosome number and distribution of Solanum aviculare Forst. and S. laciniatum Ait. T.R.N.Z. Vol. 82. part 3. Nov. 1954