A SMALL MATTER OF MOUNTAIN RIBBONWOOD

by L.B. Moore

The mountain ribbonwood is well known in the South Island and has been found on Mt. Egmont (near Blundell Track, 6.3800 feet, A.P. Druce, 1964). It is a plant of forest margins, and in sheltered gullies of the Southern Alps it can be a major component of tall scrub. It is conspicuous for its showers of white flowers in late summer, its golden colour in autumn, its bare branches in winter and its fresh green leaves in spring.

The name Hoheria lyallii was given in 1852 by Sir Joseph Hooker who had before him three specimens: one in flower collected by Dr. David Lyall from "Middle Island hills west of Canterbury", and two others in fruit, one from Dusky Bay collected by Forster in 1773 and one collected by Lyall in Milford Sound, presumably when he was there with the survey ship Acheron in early 1851. Hooker's Plate XI shows the Canterbury flowering twig with details of the flower, and a fruiting specimen from Fiordland with details of seeds. Hooker suggested that the west coast plant might possibly belong to a different species but he designated it simply "variety B" distinguished by the glabrate leaves with acute doubly-dentate lobules.

In the century following Hooker's work the species was placed successively in Plagianthus, Sida and Gaya but it is now back in Hoheria. In recent years the velvety-leaved ribbonwoods of drier districts have been known as H. lyallii, and H. glabrata is the name applied to the plants of higher rainfall areas (including Mt. Egmont) where the leaves are smoother (i.e. glabrate) and have more evenly toothed margins. However field workers find that between the easily recognised extremes there are plants that cannot be placed firmly under either name (as H.H. Allan recorded for Mt. Peel, Canterbury, in 1926), and they suggest that perhaps there is only one variable species.

In 1926 Sprague and Summerhayes found that specimens at Kew showed additional differentiating characters in that in H. lyallii the stigmas were introrsely decurrent (i.e. extended down the inside of the style tip) and the fruit segments were slightly winged whereas in H. glabrata-- the name they gave to the western plants-- the stigma was obliquely capitate and the fruit segments lacked wings. They concluded that there were still problems that could only be solved in the field.

In 1889 Kirk had pointed out that flowers he had examined (origin not stated) differed from the one figured by Hooker in the extent of fusion of the styles, and in 1925 Cheeseman noted "There are apparently two forms of flowers, one with long styles almost equalling the stamens, the other with styles less than $\frac{1}{2}$ their length".

These Hoheria flowers have many stamens, up to 50 each, free at their tips but with their bases joined into a hairy tube that breaks easily into as many sections as there are petals, usually five. Contrasting with the purplish anthers and white pollen and filaments of the stamens are the pinkish styles, 10-15 of them, ending in narrow stigmas. These styles also are joined towards their bases and the point Kirk made concerned the relative lengths of the free and joined parts of the style; Hooker showed a long free part, but in Kirk's figure the tube is long and the free ends short. Since that time this point has remained obscure.

On 6th February, 1976, on the Society's field trip to Lewis Pass, I

gathered some ribbonwood flowers at Maruia Springs and it occurred to me that this matter of the fusion of the styles could be checked much more reliably on fresh than on pressed flowers. In subsequent weeks Peter Espie, Peter Wardle and Brian Molloy kindly collected more specimens for me at several localities about Arthur's Pass and Lewis Pass where eastern plants match H. lyallii and western ones approach H. glabrata. We found a few flowers at Lake Tennyson as late as 5th April. And the result?

In most flowers, whatever the leaves, at least half and more often two thirds of the style length stood free. Occasionally styles were scarcely joined at all, and not one flower was seen with such a long style tube as Kirk illustrated. Moreover, earlier and later flowers on one plant are not necessarily alike. The length of the style tube seems to follow more or less that of the stamen tube. In this respect therefore these flowers seemed to offer no help in deciding the relationship between H. lyallii and H. glabrata. It would still be worth looking at Fiordland flowers from this point of view when opportunity offers.

Relative total lengths of stamens and styles were not particularly noted but herbarium specimens suggest that styles may reach their final length early while stamens continue to elongate and overtop the styles in older flowers though the outer ones are shorter. Stigmas need looking at more carefully. The flattened style tip is inclined to bend over in a little crook and the slightly swollen convex surface forms the sticky stigma where pollen grains adhere. The question is whether the swelling takes the form of a round head (i.e. is capitate). Many stigmas could be described as obliquely capitate, that is intermediate between a crook and a knob; the difference may simply be how pronounced the swelling is.

The wings on the segments of the compound fruits are never as broad as in Hoheria angustifolia but there is always some wing at the top. Again fresh specimens show better than pressed ones how much wing, if any, there is down the broad back of each segment. Specimens from both east and west sides of Lewis Pass show at most a very slight keel.

Such small matters can easily be looked at by anyone with a good hand lens and observations recorded in our Journal reach other interested people.

EXTRACT FROM COUNTRY DIARY

MACHYNLLETH: There can be few families of wild plants more opportunist than the willowherbs. Many of us remember the glorious pink sheets of rosebay that suddenly swept across the sites of bombed buildings during the war. And thousands of gardeners battled every summer against tall forests of other species of this eager family. It is as if some willowherbs have no true natural habitat and so must always be looking for temporary homes. To follow this way of life they have everything in their favour, for their feathery seeds go floating off on the winds of all the world. But there is one invasive willowherb that looks all set to establish itself and remain put for ever more. This, the smallest and one of the most successful invaders of Britain, is the New Zealand willowherb, and to see it at its best you should take yourself to the mountains. For though it flourishes here and there in the lowland it is amongst our alpine plants that it really looks most happy, up around 2,000 feet and higher, in the world of the Snowdon Lily, the moss campion and the purple saxifrage, lumping across west screes and over damp rocks looking as if it had been there since time began, whereas 20 years ago there wasn't a sign of it up