A well grown, luxuriant tuft of this grand Forget-me-not is a gem of the flower border, one is in doubt whether blossom or foliage asserts the prior claim to admiration.

Smooth, soft to the touch, with a subdued satin-like sheen, the leaf's paler underside contrasts with the brilliant glossiness of the deeply virid surface. Native of a humid climate, and often washed with showers of salt spray, or bedewed by heavy mists off the sea, the structure of the foliage, gracious in its sweeping curves, appear especially adapted for the collection and rapid transmission of moisture. It is a funnel with the polished surface fluted by strong veins, these are channels that unite together and lead the gathered moisture to the deep groove that furrows the upper side of the stalk, widening at the base to a broad duct. On the underside stands out in its fullness and strength the stoutly ribbed framework that firmly supports this expansive catch-water.

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ASPECTS OF THE VEGETATION OF THE WAIPARA GORGE REGION

by Andrew Dobson

Botany Department, University of Canterbury

The Middle Waipara Gorge dissects uplifted tertiary strata. The most prominent features are two bands of limestone which run in a north-east to south-west direction. The parallel escarpments of limestone face north-west and consequently are subject to considerable drought due to high sunshine and exposure to north-westerly winds. The western escarpment consists of a white limestone which weathers into massive blocks with deep fissures between the blocks. The eastern escarpment is formed by a yellowish shelly limestone which weathers much more finely producing small fissures and a mineral soil on the rock ledges. The western escarpment is lower and is cut by the Waipara River to form a deep narrow gorge. Downstream the gorge widens but still remains precipitous before cutting through the eastern limestone and out on to the Plains. The eastern escarpment is higher and has several named features: Mt. Brown (south of the river) and the Deans (three hills north of the river rising to about 500 m, the river being at about 150 m).

The climate of the gorge is ameliorated by down-valley winds at night which reduce frost incidence. This permits Myoporum laetum and Dodonaea viscosa to grow near the Deans homestead, surely the most southerly inland locality for Dodonaea. The other shrubs of interest which occur in several places on the river gravels from the gorge almost to the coast are Coprosma brunnea (usually regarded as more typical of montane situations) and Muehlenbeckia astonii.

A small calcareous flush about fifty metres from the Deans homestead contains a curious assemblage of species. Within a few metres of each other occur Baumea rubiginosa (uncommon in Canterbury), Schoenus pauciflorus (usually montane), Juncus caespiticus and Samolus repens. As far as I know Samolus has not been recorded inland before but I have also seen it on a dripping limestone bank further up the gorge.

The most interesting parts of the flora are on the limestone cliffs themselves. The massive fractures of the western limestone support a predominantly shrubbing vegetation in which Senecio monroi, Clematis afoliata, Sophora prostrata, Pimelea coccinea and Hebe raoulii are conspicuous. Stunted flax and other more familiar shrubs occur also. Clematis and Pimelea are also widespread in adjacent scrub and grassland. Of the eastern escarpment I have investigated Mt. Brown and South Dean, the latter being floristically richer. On this escarpment herbs are much more important and of the shrubs only the smaller species (Hebe and Pimelea) are important. On the most exposed parts of South Dean P. coccinea is displaced by another Pimelea. This Pimelea resembles P. prostrata in prostrate habit and small, hairless leaves, but in the greenhouse plants develop an upright habit. The prostrate habit on the cliffs is probably induced by wind-shear. The most interesting species of the herb component are Myosotis goyenii (identified by Dr. Lucy Moore), Gingidia enysii var. enysii, Linum monogynum, Tetragonia trigyna and Gentiana astonii. The last two have also been recorded for this area by Mr. A.J. Healy, Tetragonia being at its only known inland station.

The interesting features of the area are the two coastal species at their only known inland stations and the extension of the known range of two Marlborough species: Senecio monroi and Pimelea coccinea; as well as other more widespread but local species. As the limestone escarpments end abruptly 5 km south of the gorge, where there is a major fault at the base of Mr. Grey, this area is probably the southerly limit for the Marlborough species. There is a considerable gap between the gorge and the next area of limestones southwards (Castle Hill Basin). However these species would be likely to be widespread in the limestone country of North Canterbury. The discovery of Senecio monroi at Lowry peaks by members of the Society (see last year's journal) supports this. It is peculiar that some of these species have not been found near Weka Pass where the same limestones form escarpments. I hope this will encourage persons to look for them at Weka Pass and elsewhere in the limestone country.

I am most grateful to the Turnbull family of the Deans for their hospitality.

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