

TARARUA FOOTHILLS NEAR LEVIN.

A party of Wellington Botanical Society members journeyed to Levin on 3rd May, where they were joined by members of the Levin Native Flora Club for the purpose of holding a combined outing to a narrow valley in the Tararua foothills. After a short car trip from the Levin railway station the party crossed a rather undulating bridge erected early in war-time for evacuation purposes. Fortunately it was never used for this but it provides convenient access to a very charming forest region. A short walk across sun-bathed paddocks brought us to the bush, where the bed of a small stream made a track for us.

Midday was approaching, appetites were whetted: and when, under a tree-fern canopy within the bush, we found four Flora Club members with billies ready boiled for us, the sight was a truly welcome one. Forty-three hungry people gathered round, and for a while there was comparative silence. Half of us had already spent a long morning in travelling, and lunch was an item of primary importance: then we began to look around and to take stock of the fern-tree bower in which we had gathered. Just little tree-ferns they were, some being Cyathea smithii, their tender green fronds rising above the clustered relics of other fronds long dead -- now just a bundle of persistent brown "ribs" hanging downwards, their soft pinnae long since withered off. Other tree-ferns forming the green canopy were Dicksonia squarrosa, that gregarious occupier of forest verges which so often clusters into exclusive little family groups. With its hairy and tubercled stems and stiff fronds it is a harsher fern than the foregoing.

As our eyes travelled down the fern-trunks they were greeted by the delicate pale fronds of a mass of Trichomanes venosum, one of the filmiest of "filmy ferns". As though to provide contrast in colour, texture, and size, the velvet-bronze fronds of Hymenophyllum ferrugineum were thrusting out of the pale green background, while lower down the fern-trunks lurked the tiny fronds of H. tunbridgense, with sharply toothed margins. On damp banks, well-shaded, we found that "hedgohog" among filmy ferns - Trichomanes elongatum, its few fronds stiff and very dark green, and bearing long tough bristles. Altogether, forty species of ferns were noted, eleven of these being "filmies".

This valley, being narrow and over-hung with trees, has a damp and wind-free atmosphere eminently suited to the growth of such tender ferns, and also to the profusion of mosses and liverworts which enhance "the soft magic of streamlet and hill", clothing every available mound and tree-trunk with forms of enchantment and grace. A total of over thirty different species of bryophytes offers such diversity of beauty that it is invidious to select any as superior to the others: but some of the hepatics drew one's glance with special insistence. There was Schistochila nobile: each smooth leafy tip invariably entrapping a very large drop of water, which gleams like an emerald with reflected colour. Another water-holder there was Trichocolea lanata, the water held invisibly this time, as the plant's surface is smoothly woolly and absorbs water like a sponge. Perhaps the most charming of all were Trichocolea australis and Lepidolaena taylori, both forming trails of intricate filigree over prostrate logs.

Conserving the moisture of the streambed and entrapping breaths of wind before they can harm the tender growth beneath, the trees stand tall in the valley, their heads mingling to form a ceiling of green: but sometimes a space gives an opportunity to look into the tops. Swamp-loving trees, Laurelia novae-zealandiae and Eugenia maire, stand in the dampest parts of the valley floor. The Eugenia was seen with both flowers and ripe fruits. From the ground under it was thrust a cluster of its pinkish pneumatophores, quite tough but spongy. A few of these breathing roots collected on a previous occasion were found to lose their moisture-content very rapidly and to shrink to about one third of the size. There were numerous small specimens of Pseudowintera axillaris, their somewhat mottled juvenile leaves contrasting with the glossy dark green of older plants. An interesting shrub was Aiseosmia pusilla, which hereabouts rarely seems to attain a height of more than about two feet. It has creamy bell-shaped flowers followed by large succulent cherry-red berries. This species, described by Colenso (Trans. N.Z. Inst. vol. 17, 1885) is of special interest as being the only representative of its genus native to the southern part of North Is.

On a warm ridge, on the eastern side of the valley, where some of the party climbed to tree-top height and looked down on the forest, there was Metrosideros scandens smothered with fat buds and a few clusters of brick-red flowers, forerunners of winter's floral profusion. There, too, we saw a number of small specimens of Mida salicifolia. They occur fairly frequently on the ridges in this neighbourhood, always, it would seem, in warm aspects.

More refreshment under the tree-fern canopy fortified the party for the beginning of the homeward journey. Before setting out for the railway station we strolled along the road for a short distance to see a flourishing patch of Elatostema rugosum. This is quite plentiful in this district, though the Levin area is not far from its southern limit. Frost will blacken and cut the patch we admired, but it will sprout again as well as ever.

It is a long time since the last combined outing of the Wellington Botanical Society and the Levin Native Flora Club, and it is to be hoped that other such gatherings, surely of mutual benefit, may be possible from time to time.

Frances C. Duguid.

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#### SOIL CONSERVATION.

On the evening of March 17th, Mr. D. A. Campbell of the Rivers Control and Soil Conservation Service entertained members with a film show. Two spectacular movies showed some of the great works carried out by the Tennessee Valley Authority in the United States of America. Giant pylons striding across the reclaimed farmlands of the Tennessee Valley, carrying power into small farmhouses and great fertiliser works, demonstrated to us very forcibly the wide scope and manifold benefits of this huge soil conservation organisation. When we questioned Mr. Campbell about work in New Zealand he had many interesting remarks to make from his own observations. The problem of accelerated erosion in the North Island of New Zealand was largely an indigenous one, a problem of slips on steep slopes, which could not be compared directly with the vast landscapes of the Tennessee Valley. Judicious planting of slipping hillsides with suitable trees has proved successful in arresting soils movement in parts of the North Island where Mr. Campbell has worked. Many different plants were named which have been used in trial plantings by the speaker who has attacked these urgent problems with great energy and enthusiasm. A cordial vote of thanks was passed but the vigorous discussion carried on till the doors of the building were closed and the members finally dispersed on their different roads home.

G. B. C.

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#### A FUNGUS GARDEN.

The exhibit of larger fungi which were gathered by several members for display at our reception on May 19th made a very colourful 'Fungus Garden'. The bright shades, beautiful shapes and great variety of these plants are surprising to many people. They are abundant in the bush only at the time of year when few folk are abroad for they fruit during autumn and winter. They grow very fast but last for a short time and so are easily missed. Many of them like the brilliant purple puffball, Secotium porphyreum and the small dainty clubs, Clavaria spp. of all colours, may fruit half-hidden in the litter of the forest floor. When one has developed an eye for fungi one can spot these shy specimens and unearth them, often to the surprise of others who would walk past the same place seeing nothing particular. There is often something of a camouflage effect when the fungi are growing in the bush. When they are gathered up and many put together the bright conspicuous colours are striking, but in their natural haunts they harmonise with their surroundings. A few always shout their presence. The common puffball, Secotium erythrocephalum, can seldom hide its brilliant red head, and the introduced scarlet toadstool, Amanita muscaria, is always a startling sight. In order to get for our show some perfect specimens of this very decorative species, one of our members hunted long to find some which had not been handled and broken by someone else. She crawled into a dense thicket in the middle of a place where they were growing in abundance, collected the elegant toadstools and safely made away out with the fragile load which duly appeared in the fungus collection.

G. B. C.