

clean camp, and return to record another day of pure delight, to sit by the roaring fire and recall what each had seen and thought. The next day gloomed as we approached Wellington, and at the station a shower of hail greeted me.

H.H.Allan.

(Taumangi is Cyathodes acerosa; koku-hu is Pittosporum tenuifolium; rororo is Olea montana. Corysanthos triloba displayed at the June meeting was labelled C. oblonga in error.)

PLANT COLLECTING DO'S AND DONT'S.

We are all proud of our New Zealand vegetation for the many beauties it presents in single species of outstanding appearance and in a plant cover of great beauty for all parts of the country. We are proud, too, that so many New Zealand plants are true New Zealanders, found nowhere else. Three quarters of our flora is endemic. The great variability of many species, the common occurrence of 'juvenile' forms and widespread natural hybrids are features of especial interest, possibly related to the high percentage of endemics. Certainly we have a flora worth knowing, and one to stimulate our botanical studies.

One good way to get to know our plants is to grow them. By watching them and caring for them in a garden we may find out quite a lot from them; but we must remember that the best place to study plants is in their own environment. We can hope to unravel some of the problems of our native plants only by studying native vegetation, where many plants grow together in a delicately balanced community. Collecting for gardens therefore, must be done with the utmost caution. We must be vigilant to maintain what little natural vegetation is left. We want to study it as it is, ourselves, and those who come after us will certainly also want to see it.

In order to preserve the bush that we know the following rules should be noted: -

Collect no plant unless you are sure that you can grow it. Take nothing that has a chance of succeeding where it is.

Take nothing that can be got from another garden or nursery. Best of all, raise your own plants from seed or cuttings.

If you do collect in the bush take only very small plants, and immediately they are pulled up tie some moss or damp leaves firmly round the roots. Look especially along the track or roadside. The slashing and tramping that keeps the track clear opens a space of bare soil to the light and here many seedlings come up. These may not mature if the track is kept open, so they may as well be removed to a garden. Similarly, on the roadside where cuttings and drains are regularly cleaned many seedlings are found and may be rescued before the roadman gets them. A few yards of road is a more fertile ground for seedlings than a mile of dense bush. Along a river-bank also, many seedlings will be found on the bush borders which are swept clean by floods.

Small plants from one to six inches high are the only ones worth taking. Larger plants will probably fail and should be left where they are. It is a dismal sight to see folk despoiling the bush of plants which would have grown well if left in their proper place and which will likely die in a foreign garden. Too often, people who start with enthusiasm for the native vegetation get collectors' mania and become dangerous enemies of that which they pretend to love. Before you collect anything in the bush hold your trowel and consider if it is really legitimate to take the find home.

Greta B. Cone.

MEETING PILULARIA NOVAE-ZEALANDIAE.

Travellers' Valley must have been well-known in the eighties when it lay on the main land route from Nelson and Marlborough to Canterbury. Today the cattle man does some mustering thereabouts, a deer culler looks the place over perhaps every couple of years, and an occasional trumper trudges through. Only very rarely does a botanist get to this remote corner where W.T.L. Travers long ago did the pioneer collecting.

An almost imperceptible watershed separates the upper Wairau River a little above its gorge, from the series of tarns that lead to Travellers' Valley.

On this side the water flows by the Severn and the Acheron to the mighty Clarence River. The encircling mountains, reaching four to five thousand feet are mostly bare and stony though the steep sheltered valleys beyond the Wairau carry ragged patches of dark beech forest. The rolling tussocky Tamdale plain, obviously the floor of a prehistoric glacier, lies about 3,000 feet above sea level and stretches several miles in each direction. There are some half dozen tarns of different sizes, all dark and peaty in their depths and much frequented by black swans and noisy paradise ducks.

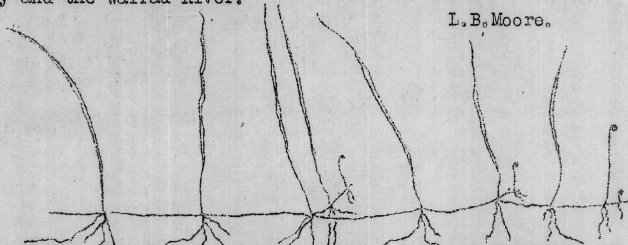
Imagine a clear cold steely sky reflected in the still water of one of the smaller tarns. The bordering tawny tussock adds some warmth of colour, and a group of cattle, wading and drinking in a little bay, completes the picture.

Shallowing very gradually to its edge, the water of the tarn carries a surprising quantity of flotsam, bright green uprooted water-plants that contrast strongly with the dark bottom of peaty earth. From this half-stranded fringe of greenery, at the approaching footstep, inch-long, semi-transparent fish dart out in hundreds and make for deeper water.

Aquatic plants are often neglected by collectors, but here the first glance shows some aristocrats that are not to be passed by. There is some sturdy *Myriophyllum* (*M. elatinoides*), but the great bulk is *Isoetes*! The tufted rush-like plants have quill-shaped leaves averaging perhaps six inches long. The swollen leaf bases are conspicuously white and even a rough bowie knife dissection shows that each contains an oval spore sac. Notwithstanding their appearance, these plants are more nearly related to ferns and lycopods than they are to rushes and sedges. They have turned out to be *Isoetes alpinus*.

Also in the "drift" is a smaller sedge-like plant. It might be a non-flowering *Scirpus*, but as we may not pass this way again, it is worth taking a handful to look at more closely. The handful gets its label, dries off in the pack, and when the trip is over, is put aside to await that elusive "leisure hour". When the final tidying-up comes, the shrivelled little scrap looks so pitiful that it is almost thrown out as hopeless - but it might be worth one quick lookover. A drop or two of water will help in the unravelling -- and so it does! The first thing the lens shows is a young leaf tip curled like a watch-spring! That means it must be *Filularia* -- that unfernlike water-fern that every student knows about, and so few people ever collect. And this is how it looks when it floats loose from the bottom of the little lakes at Tamdale between Travellers' Valley and the Wairau River.

L.B. Moore.



(This article has already appeared in the Auckland Botanical Society Quarterly News Sheet for June, 1945. We hope to have a contribution from Auckland in our next issue.)

BOTANIZING IN SOUTH WEST OTAGO.

Dr. Oliver's talk on 16th April was an account of a trip to the Homer region during last summer. He showed us a large number of very beautiful lantern slides, and brought along also a representative set of herbarium specimens.

A diagram showed by transverse section the relations of the Cleddau valley on the west and the Homer valley on the east, separated by a mighty wall of granite now pierced by the Homer tunnel at a level of about 3000 ft. The valleys here have all been formed by glacier action and have as common features the snow field reaching the valley lip, walls formed of vertical cliffs and, at the base of these, steep talus slopes two to three hundred feet high. The almost level valley floor where the river flows is formed of boulders that fill the