FROM THE RAKAIA TO THE BIG WANGANUI RIVER.

Abstract of a talk on March 18th.

In the Christmas holidays of 1945, I was a member of a tramping party which went into the Upper Rakaia Valley by way of Lake Heron, stayed for several days in the Lyell Hut, then crossed the Strachan Pass into Westland, scrambled around the bluffs and hillsides of the Lord and Lambert rivers and travelled down the Wanganui River to the main Westland highway. On such a trip, in such country, with a big party, a limited time, and all food and gear to be carried, it is of course impossible to collect as much as one would wish or even to take adequate notes. Only what seems at the time the most interesting plants can be collected or features noted. But scarcely anything seems to be known of the mountain plants of Westland in the hundred miles between the Otira Gorge and the Franz Josef River. Collectors have been on Mt. Greenland near Ross which is not quite 3000ft. high. The journey down the Lord and Lambert Valleys has been made only three or four times and so far as is known no account has been given of the plants seen, so that any notes made in this region help to fill in a gap in our knowledge. Botanists have, on the other hand, fairly frequently visited the Upper Rakaia Valley. Haast and others collected there in the early days. Cockayne has described the colonisation of the river flats (Trans. and Proc. Bot. Soc. Ed. XXIX: 104) and with Laing has described the vegetation in the paper on the Arrowsmith District (Trans. N.Z. Inst. XLIII: 315). Species not previously recorded for the area are marked (*).

We started our trip from Lake Heron, which lies in an open flat tussock-clad valley and drains by way of Lake Stream into the Rakaia. The track skirts the east side of a swamp formed by Lake Stream, and the bright green of the sedge Carex trifida and the dull red of Schoenus pauciflora are conspicuous in the landscape. The native dock, Rumex flexuosus was flowering in the swamp and Bulbinella hookeri was abundant on the damp ground at its edge.

At the ford Prasophyllum colensoi and two forms of Plantago spathulata, one with entire and one with pinnate-edged leaves were found.

The night was spent in Down's Hut, at the edge of one of the patches of mountain beech forest which occur in the western tributary valleys of Lake Stream.

On the track from Down's Hut over Prospect Hill down to Thompson's Hut perhaps the most striking features of the vegetation were the large clumps of Celmisia spectabilis. This was the larger very long-leaved form found from about 2500 ft. upwards on the eastern hills of Canterbury such as the Two Thumbs, Four Peaks and the foot of Mt. Somers. Here were noted a few plants of Epilobium pictum and much Epilobium melanocaulon and its variety E. melanocaulon var. viride. The only trees were a few scattered well-grown kowhais and broadleafs.

The mouth of Thompson's Stream was thick with matagouri. From here to Washbourne Hut the way lay over river flats, sometimes bare and stony, with patches of scabweed or epilobiums and occasionally Myosotis angustata, with silvery leaves and yellow flowers, sometimes grassy with scattered matagouri. On the hillsides of the north side of the river was a band of totara forest, with gaps here and there where it has been burnt off.

Near Washbourne Hut itself are small patches of rather low bush, the chief trees being kowhai, ribbonwood, broadleaf and lancewood, with some Pittosporum tenuifolium, Phyllocladus alpinus, totara, and Nothopanax sp. There were a few scramblers including Clematis australis, a sheet of pale yellow flowers.

Further up the river Gaultheria rupestris and Archeria traversii were in flower on rocky banks.

Above Mein's Knob there is a fairly extensive patch of scrubby bush and here stands the Lyell Hut. Phyllocladus alpinus and Dracophyllum sp. were co-dominant but other tall shrubs present were Podocarpus nivalis, Olearia avicennaefolia, O. nummularifolia Senecio bassinioides, Nothopanax colensoi, and Hoheria glabrata. Smaller shrubs were Hebe leiophylla, Suttonia divaricata, Coprosma rugosa, C. serrulata, and various other coprosmas, Herbaceous plants in the more open places were the aniseeds, Anisotome pilifera and A. haastii, and in full flower and three feet tall, Ranunculus lyallii. A few plants of Celmisia du rietzii were in flower on the shaded rocks of the stream.

The open river terraces are in places very damp where small streams sluggishly wander. Here were found the greyish green Celmisia novae-zelandiae and C.glandulosa, C.gracilenta, Plantago brownii, Gunnera dentata, Craspedia uniflora, the brownish Rumex flexuosus, the shining dark green Celmisia bellidioides. There were a few stray plants of Celmisia sessiliflora in flower. On the steep banks Celmisia petiolata and C.coriacea were in full flower.

The shingly river flats and moraines, as was to be expected, only supported a sparse vegetation, chiefly epilobiums and raoulias. On the river flats, besides the well known Raoulia australis and R.tenuicaulis there were smooth green humps of R.haastii and in places, toning so well with its grey rock background that it was almost overlooked, a silvery-grey, loosely-packed Raoulia, apparently an undescribed species.

On the lower Ramsay moraine this latter Raoulia and Epilobium melanocaulon were the only two species noted and they were scattered very sparsely.

From the lower Ramsay to its head is bare of plants. But on the rocks which poke through the snow under Erewhon coll were scattered cheerful little yellow-flowered groups of ✕ Ranunculus sericophyllus, young plants of R.godleyanus, ✕ Hectorella caespitosa and some ✕ Luzula colensoi.

Our route up the Ramsay and Clarke Glaciers over the Strachan Pass and Lord Glacier was of course bare of vegetation. But at the foot of the Lord Glacier there was a natural gateway of rock made gay with great clumps of ✕ Ranunculus godleyanus, a pleasing sight with its large shining leaves and clusters of yellow flowers. The ledges were white with Ourisia caespitosa.

Some more rock and shingle and then what few of us had seen before -apparently quite untouched tussock grassland. Tall snowgrass on the hillside with scattered shrubs - some hebes here and there - and everywhere Ranunculus lyallii in full flower. There was no time to note the numerous species which enjoyed the snowgrass shelter but Aciphylla colensoi was both felt and seen; the straggling Coprosma depressa was covered with small crimson fruit and Celmisia coriacea and C.petiolata were in full flower.

Further on, as we sidled the hillside, the snowgrass became much shorter and R.lyallii and C.coriacea completely disappeared. Numbers of chamois were seen grazing hereabouts.

Here, on the Lord Range, were ✕ Ranunculus sericophyllus, but on damp soil more often than rock, Caltha novae-zealandiae in damp places, Ourisia sessiliflora and, near rocks, O.macrocarpa, both rarely in flower; Ourisia caespitosa, ✕ Aciphylla crenulata, a striking orange form, Geum parviflorum, Anisotome pilifera and A.haastii, Cotula pyrethifolia, Celmisia glandulosa, Coprosma pumila and C.depressa, Pygmaea sp., and Hebe ciliolata.

The scrub line was considerably lower on the north side of the valley, than on the south. This difference is no doubt due to the aspect which must have a considerable effect in such a narrow deep valley.

We camped on "Boney's Lookout", high above the Lord-Lambert Junction, in tussock with scattered shrubs of Dracophyllum, Phyllocladus alpinus, Podocarpus nivalis.

On Blue Lookout, next day, we found Dracophyllum kirkii, ✕ Cyathodes pumila, Olearia colensoi, ✕ O.lacunosa, and the mountain mop, Dracophyllum traversii. At the foot of the rocks were masses of Ourisia macrocarpa in full flower.

Dropping over the lip into a slip at the head of Benighted Creek we saw scattered green pyramids of the mountain cedar, Libocedrus bidwillii. In the scrub was Olearia avicennaefolia and occasionally ✕ Archeria traversii. In the bush proper Olearia lacunosa had broader, longer leaves than when exposed above the bushline.

It was a long tiring descent by a forty-year-old track to the Lambert and thence to the Wanganui. Here on the flats we saw once again exotic weeds. But there was also Cardamine heterophylla, Mentha cunninghamii peeping in the grass, Carmichaelia angustata, all in flower, Coriaria plumosa thick with fruit, and flat on the sand a Carmichaelia, probably of the Huttonella group.

Next day was one of creeping up and around bluffs, interspersed with travel on river flats, boulder strands, rocky river edges. As to be expected in Westland the South Island rata was abundant and often in flower. Ascarina lucida, a handsome dark shining leaved tree, and ✱ Quintinia acutifolia, both well known in Westland forest were there too.

It was interesting to find a patch of Forstera tenella growing on the clay slip on a bluff at only 700 ft. above sea level.

As we waited for the bus at the roadside we found Olearia macrodonta growing plentifully.

R. MASON.

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THE NEW GOLDEN HIND EXPEDITION TO THE FIORDS.

Described by Dr. Allan on April 15th.

Carrying 7 scientists and its own crew of 8 men, the Public Works Department ketch "New Golden Hind" left Bluff on January 25th last. The expedition was to explore the south-west sounds as far north as Doubtful Sound, with the special object of deciding whether the region held significant quantities of uranium ores which are being sought in all parts of the world as sources of atomic energy. The party included geologists, geophysicists, and one soil man. As the botanist, Dr. Allan thoroughly appreciated the opportunity of collecting where few plant records have been made since those of the Forsters and Spormann in 1773, Menzies in 1791, and Lyall in 1850.

At Bluff, with rata in full bloom, the oddest botanical find was a lancewood bearing an apical inflorescence while still in the unbranched, long-leaved, juvenile stage.

By daybreak on 26th, the Solanders were astern, and Puysegur Point abeam, and it was still early when the ship anchored in Revolver Cove, Preservation Inlet. Small boats with outboard motors took parties in different directions, and the botanist was soon amongst Olearia operina and Dracophyllum menziesii. Next day, landings were made in Useless Bay and Isthmus Sound. A typical sequence of vegetation as seen above the shelving pebbly beach near the Narrows was: Samolus, a girdle of Leptocarpus simplex, narrow belt of manuka and Coprosma propingua with a little O. operina, backed by forest of rimu and beech, with a tremendous wealth of bryophytes, even almost excluding ferns on the ground. The bush line is at about 2000 feet, with alpine plants above. From the heights came Ourisias and Forsteras, and an apparently new Celmisia, quite as large and attractive as C. petiolata. On Chalky Island grows Urtica australis, a large-leaved nettle not previously known except on the Chathams, Auckland and Campbell Islands, and some islets in Foveaux Strait.

At Northport in Preservation Inlet is a fishing station using the wreck of the "Stella" as a jetty. On the nearby Little Is. characteristic plants are:- Nothofagus cliffortioides, Dacrydium intermedium, rimu, rata, miro, and kamahi, with Gahnia procera in the undergrowth.

Seaweeds were photographed and collected, one of the interesting results being that Macrocystis (the big bladder-kelp) is recorded in all the sounds visited, in considerable quantity until towards the head of each the water becomes too fresh. With a dredge samples were obtained from the bottom of the fiords, and these yielded both algae and molluscs of interest.

Drying papers for the plant presses became a problem as numbers of specimens increased, until a small gas stove was requisitioned. This proved ideal, except for rather odd smells given off!