

Dracophyllum subulatum, *Gaultheria rupestris*, *Leucopogon Fraseri*, *Podocarpus nivalis*, *Dacrydium laezifolium*, and *Phyllocladus alpinus*. There are also prominent the herbaceous plants *Celmisia spectabilis*, *Celmisia longifolia*, *Celmisia incana*, *Celmisia glandulosa*, *Helichrysium bellidioides*, *Ourisia macrophylla*, *Ourisia Colensoi*, *Euphrasia cuneata*, *Gentiana bellidifolia*, and *Ranunculus nivicola*: *Poa Colensoi*, *Danthonia Raoulii*, and *Hierochloa redolens* abound. *Carpa alpina* is also much in evidence. The foregoing plants extend up through the boggy slopes almost uniformly to two or three hundred feet from the rocky summit (about 5,000 ft.), where there are only a few gaultherias, celmisias, dracophyllums, *Totara nivalis*, *Veronica tetragona*, *Coprosma depressa*, *Poa Colensoi*, &c., with lichens and mosses, to represent the vegetable kingdom.

In the valley lying between Hauhungatahi and Ruapehu are large patches of mountain-beech forest, between which are boggy spaces carrying the shrubs, herbs, &c., that other similar localities in the district carry.

Travelling from Erua in a southerly direction to Pokaka, the same approximate altitude of 2,600 ft. is kept; and the predominating forest-trees are tawhero (*Weinmannia racemosa*), *Olea lanceolata*, *Griselinia littoralis*, *Myrsine salicina*, *Panax arboreum*, *Carpodetus serratus*, *Elaeocarpus Hookerianus*, *Libocedrus Bidwillii*, *Dacrydium cupressinum*, *Podocarpus spicatus*, *Podocarpus ferrugineus*, *Podocarpus dacrydioides*, and some *Fagus Solandri*; with the usual undergrowth of *Coprosma tenuifolia*, *Coprosma grandifolia*, and *Coprosma foetidissima*, *Drimys axillaris*, *Drimys colorata*, *Myrtus pedunculata*, with an abundance of the ferns *Todea superba*, *Aspidium aculeatum* var. *vestitum*, and *Lomaria discolor*. The giant astelia (*Astelia nervosa*), *Enargea marginata*, and *Cordyline indivisa* now form prominent features in the forest. The *Cordyline indivisa* (mountain cabbage-tree) almost takes possession of any neglected bush-clearing, and forms beautiful avenues along the roadsides. It is a shame that this queen of lilies should have a name that associates it with the kitchen-garden. Unfortunately, my best picture of it was spoiled. In the accompanying photo it is represented by only small specimens.

In this stretch of country lie the Makatote* and Manganui-a-te-ao Gorges, and, being some 300 ft. deep, they naturally carry plants that are not seen on the table-land above. For instance, *Fagus cliffortioides* is found on the gorge-sides, *Cladium Sinclairii*, *Dracophyllum longifolium*, *Coriaria ruscifolia*, *Coriaria thymifolia*, *Gaultheria rupestris*, *Gaultheria antipoda*, *Lomaria vulcanica*, *Senecio latifolius*, *Olearia nitida*, *Arundo conspicua*, *Veronica catarractae*, *Ourisia macrophylla*, *Calceolaria repens*, *Carmichaelia flagelliformis*, *Leptospermum scoparium*, *Cyathodes acerosa*, *Raoulia tenuicaulis*, *Helichrysium bellidioides*, and the subalpine plants *Ranunculus insignis*, *Veronica Hookeriana*, *Gentiana bellidifolia*, *Celmisia spectabilis*, *Cassinia Vauvilliersii*, and *Senecio Bidwillii* here and there make their appearance on the river-beds.

Travelling due west from Pokaka Station, though the altitude remains about the same, the dominant *Libocedrus* gradually lessens, and at a distance of about three miles from the railway the forest approaches in constitution that growing at the 1,500 ft. level. The chief tree components are rimu (*Dacrydium cupressinum*), growing much more luxuriantly than in the last-described localities, matai (*Podocarpus spicatus*), miro (*Podocarpus ferrugineus*), *Weinmannia racemosa*, *Griselinia littoralis*, *Olea lanceolata*, *Myrsine salicina*, *Carpodetus serratus*, *Pennantia corymbosa*, *Panax arboreum*, *Pseudopanax crassifolium*, *Elaeocarpus Hookerianus*, *Olea Cunninghamii*, *Panax Edgerleyi*, *Elaeocarpus dentatus*, *Podocarpus dacrydioides*, *Coprosma Colensoi*, *Plagianthus betulinus*, and *Dacrydium Colensoi*; the undergrowth is principally *Aristotelia racemosa*, *Drimys colorata* and *D. axillaris*, *Fuchsia excorticata*, *Coprosma tenuifolia* and *C. grandifolia*, *Panax Colensoi*, *Myrtus pedunculata*, *Coprosma foetidissima*, *Melicetyrus ramiflorus* and *M. lanceolatus*, *Brachyglottis repanda*, and *Coprosma parviflora*. Tree-ferns are more plentiful, the chief being *Dicksonia fibrosa* and *Hemitelia Smithii*, with occasional *Dicksonia squarrosa* and *Cyathea dealbata*. Of small ferns, *Todea superba*, *Lomaria discolor*, *Lomaria fluviatilis*, *Lomaria lanceolata*, *Lomaria Pattersoni*, *Lomaria capensis*, *Pteris incisa*, *P. scaberula*, and *P. aquilina*, *Hypolepis distans*, *Hypolepis tenuifolia*, *Asplenium falcatum*, *A. flaccidum*, and *A. bulbiflorum*, *Aspidium aculeatum* var. *vestitum*, *Polypodium Billardieri*, *P. novae-zelandiae*, and *P. grammitidis*, *Hymenophyllum pulcherrimum*, *H. demissum*, and *H. rarum*, are all plentiful. The lianes are *Rubus australis*, *R. cissoides*, and *R. schmideloides*, *Muehlenbeckia australis* and *M. complexa*, *Parsonia heterophylla* and *P. capillaris*, *Clematis indivisa*, and *Metrosideros hypericifolia*; the *Rhipogonum scandens* is still noticeable by its absence. The soil in this locality is still a light-brown volcanic loam.

Progressing from Pokaka, still at the same altitude, in a southerly direction to Horopito, one traverses between the *Fagus* and taxad zone; on the west the forest is composed mostly of rather stunted *Dacrydium cupressinum* (rimu), *Podocarpus spicatus* (matai), *Podocarpus ferrugineus*, *Libocedrus Bidwillii* (cedar), *Podocarpus dacrydioides*, and occasional *Dacrydium Colensoi*. Between the railway and the base of Ruapehu the forest-trees are mostly *Fagus*, *Weinmannia racemosa*, *Griselinia littoralis*, *Panax arboreum*, *Elaeocarpus Hookerianus*, with an occasional rimu, kaikawaka, totara, and matai. The chief shrubs and smaller trees are *Myrtus pedunculata*, young *Fagus Solandri*, *Panax simplex* and *P. anomalum*, *Coprosma tenuifolia* and *C. foetidissima*, *Myrsine divaricata*, *Pseudopanax crassifolium*, *Leucopogon fasciculatus*, *Cyathodes acerosa*, *Coprosma robusta*, *C. propinqua*, *C. Colensoi*, *C. cuneata*, and *C. parviflora*. *Astelia nervosa* is plentiful on the mossy floor. In this locality I found growing on a rotten tree-trunk one or two very large specimens of the orchid *Chiloglottis cornuta*. At about three miles from the railway the *Fagus Solandri* gives place to the *Fagus fusca* and *Fagus Menziesii*, which continue to the outer zone of forest, where *Fagus cliffortioides* takes their place, and becomes the dominant tree.

Advancing from Horopito to Ohakune (which is 2,000 ft. high) the taxads again become more vigorous, and another more noticeable change is the occasional intrusion of wedges of rata (*Metro-*

* "Makatote" (which is locally mispronounced "Makkatote") is a contraction of the Maori "Manga katote"—manga meaning a branch of a river, and katote being the name of the tree-fern *Hemitelia Smithii*.