

where evidence of extensive forests, in the shape of old trunks of trees, said to be chiefly totara and cedar, either a few feet below or on the surface, even on the tops of some of the highest ranges; but of living forest, or even scrub, there is none even in the ravines and gullies. Various conjectures have been hazarded as to the causes which have led to the complete disappearance or destruction of the forests in this locality, but none that I have heard appear satisfactory, or can be substantiated. The fact remains that throughout this extensive mining district, where timber is much required, it is conspicuous by its absence, and ordinary descriptions cost 50s. per 100 superficial feet at Clyde, Oregon pine being even higher. South-east of Ettrick the soil is much better, and at and beyond Lawrence towards Milton the whole character of the country changes, and we find tree and shrub vegetation on the banks of streams, and on some of the hill-sides. I paid special attention to the soil, &c., on the sites of old workings, as Dr. Hector had called my attention to the desirability of planting them. The matter will be alluded to more fully when dealing with the special subject of planting, but I may state here that the tailings seem generally unsuitable, from the soil having been, as a rule, entirely washed away, and nothing but stones and gravel left. In some instances, however, notably in the Weatherstone Flat, near Lawrence, there are suitable tracts left by the miners after "paddocking," which I think it highly advisable to plant. The eucalypti will not answer, on account of the frost, but European and Californian pines would answer well. During my tour on the gold fields Mr. Kirk visited the Oamaru district, and we both returned to Dunedin on the 20th December, and proceeded on the 25th to Balclutha and Catlin's River, where we spent three days inspecting the forests and saw-mills; thence to Maitua, where Mr. McArthur, the Inspector of Forests for Southland, met me, and Invercargill. I spent a week in Southland visiting the forests in the Seaward Bush, Croydon, Winton, &c., and collecting information from Mr. McArthur, Mr. Pearson (the Commissioner of Crown Lands), and other gentlemen. At Invercargill I was much pleased by a visit which we paid to Mr. Cleave's nursery gardens. His collection of larch, spruce, and Scotch fir, *P. austriaca*, *laricio*, *Jeffreyi*, &c., is very extensive, and compares favourably with any I have seen in the colony, the young plants being healthy and well rooted. *Pinus austriaca* is, I think, likely to do exceptionally well in Southland, and *P. laricio* has the additional advantage that it is said rarely to be attacked by rabbits. (*Vide* "Reports on Forest Management," page 93.)

From Southland I visited the Wakatipu, Wanaka, and Hawea Lakes, crossing the crown range from Queenstown to Cardrona and Pembroke, and on to "Fraser's Station" at the head of Lake Hawea and mouth of the Hunter River, and extending my inspection from the head of Lake Wakatipu (Kinloch) to Lake Harris and the slopes above the Holford River.

The general character of this lake district closely resembles that which I have already described in describing the gold fields country. There is the same marked absence of tree growth on all the lower or easterly side, and a line drawn from the present terminus of the Invercargill and Kingston Railway at Elbow or Lowther to the lower end of Lake Hawea would pass by no forests worthy of the name.

Only as one ascends the lakes patches of forest are found in the ravines, and the upper ends of all these lakes (Wakatipu, Wanaka, and Hawea) are thickly clothed with beech forest.

The trip from Wakatipu to Lake Harris was most interesting and instructive. We passed through heavy forest of *Fagus fusca*, *Solandri*, and *Menziesii*, the latter predominating in the higher altitudes, where the totara, which was frequent in a young stage of growth in the valley, all but disappears. A most marked and gratifying feature in the forest which has been worked near Kinloch is the fine renewal or reproduction which is everywhere going on, which would, I think, convince the most sceptical that New Zealand forests of this description, at any rate, can be reproduced naturally with ordinary care and the exclusion of fire. The same may also be stated with regard to the forest on the Hunter River and upper end of Lake Hawea, where the forests which we inspected were almost entirely *F. Solandri*, mixed with a little manuka (*Leptospermum ericoides*), the trees of the former being, as a rule, young, and not averaging more than twelve inches in diameter.

In the vicinity of Lake Harris Mr. Kirk found much of botanical interest, amongst which I may note *Dacrydium laxifolium* and *Podocarpus nivalis*, two of the smallest varieties of the pine tribe known. Lower down in the valley we found *Fagus cliffortioides*, a variety of beech described by Dr. Hooker, but not frequently found.

On the 15th of January we were back in Invercargill in hopes that we should find that the steamer "Maori," with the owners of which I had been in negotiation to take us to Stewart's Island and the West Coast sounds, &c., had been made available, but in this we were doomed to disappointment, as I learned by a telegram from the manager of the U.S.S. Company that she had been docked for repairs, which would extend over an indefinite period. We therefore reluctantly retraced our steps *via* Maitua and the Taieri Plains, in which I noted the fine growth of the blue-gum, to Dunedin, and thence by steamer to Christchurch and overland to Hokitika.

It is matter of much regret that no Government steamer could be made available, as originally arranged both with Sir Julius Vogel and Major Atkinson, for the trips to Stewart's Island and the West Coast sounds. Mr. Kirk's services had been specially retained during his Christmas recess for the purpose of making a thorough investigation of the flora of those localities, which is but little known; and the omission of information regarding those forests, which are believed to be extensive and valuable, which it was impossible to obtain in the time at my disposal by making use of a sailing craft, or by any means save that of a steamer specially made available for the purpose, constitutes, I cannot help feeling, a serious want in this report, and in the completeness of my inspections as originally chalked out. Even had I known definitely at an earlier date that no steamer could be made available, I should have made a point of reaching Martin's or Jackson's Bay from the Otago Lake District, but it was not till the first week in January that I was informed that no Government steamer was available, nor until the 15th, as already stated, that I ascertained for certain that arrangements for the "Maori" were impossible. I had then to make the best arrangements I could, and I trust that the Government and House will consider that I did so by gathering all the information I could from Mr. Pearson and others, and making the best of my way to Hokitika overland *via* the Otira.