

2,000 acres beyond Podda's mill, the average quantity of timber—taking twenty trees each—being 20,000 superficial feet per acre. The forests here are principally rimu, white- and silver-pine, with rata and miro intermixed—not any totara, kawaka, or matai; and Mr. Hornby calculates that there is a twenty-five years' supply in the district between Greymouth and Hokitika.

The next mill visited was that of Mr. J. C. Malfroy—the Hokitika Sawmill Company. The engine here is 84-horse-power, 100 lb. pressure, 3 ft. 10 in. stroke, and 16 in. in diameter. The tramway is three miles in length, and Mr. Malfroy is having a new hauling-engine made in a Greymouth foundry on a design of his own. The timber operated upon is principally rimu and white-pine, with small quantities of black-pine (matai); and the area worked over is 400 acres. Two hundred acres of freehold have been worked out, and Mr. Malfroy has rights over 200 acres of mining and a similar area of railway reserves. The mill has been at work since 1875, and all the timber used has been obtained within a radius of three miles. Mr. Malfroy estimates that there are still available forests eight miles by five, from the Blue Spur to Bridge, and that these represent a thirty years' supply of timber.

Visits were paid to several large mining claims—Humphries Gully and Mont d'Or, at Ross, the forest country between Hokitika and Ross being examined *en route*, and notes taken of the timber available. It is generally agreed that here, at the present rate of consumption, there is thirty years' supply before the district is worked out.

The estimates recorded above, of course, point to the conclusion that within thirty years the whole forest country between Greymouth and Ross—one of the best timbered regions in Westland—cut out by the sawmiller and wrecked by fire, will have been utterly destroyed. Moreover, the forests of the West Coast are not so extensive as they appear. They consist of a narrow strip of from ten to fifteen, and in a few places twenty, miles wide between the sea and the Great Barrier Range, and from one hundred and forty to one hundred and fifty miles long. Of this, too, only about one-third covers medium to good timber, the rest being merely scrub. On the mountains, over and above the snow-line, the timber is generally stunted and worthless, though in places some good beech is found. About six or eight miles south-east of Ross there is some fine cedar (kawaka), the best on the West Coast.

After my return from Ross to Hokitika and Kumara, and inspecting Mr. Morris's sawmill at the last-named place, the overland trip to Christchurch, through the Otira Gorge, was commenced on the 21st August.

From Kumara, along the right bank of the Teremakau River, a fine forest extends for some miles in the direction of Jackson's, and thence to the entrance of the Otira Gorge. In the gorge itself the timber is stunted and poor, and from the summit at Arthur's Pass the treeless country commences from the boundary post between Westland and the Province of Canterbury.

A little timber is found near Bealey, and a few bushes along the Waimakariri River. Then, the timber country lies behind us, and, as we dash down the steep descents, through Porter's Pass and other dangerous elevations on the road, the plains of Canterbury gleam yellow in the strong sunlight.

The roads are steep and dangerous, but "Jack" handles the ribbons with such good results that we arrive safely at Springfield in ample time to catch the train for Christchurch, reaching that city in the evening of Saturday, the 22nd August.

Two days were spent here in inspecting the Gardens, Museum, &c.; also, the sawmills of Messrs. Edwards, Brown, and Walters, and the plantations in and around Canterbury; and on the 26th August I left for Dunedin. As I am devoting a special section of this report to tree-planting in Canterbury and Otago, I need not touch here upon that subject.

At Dunedin I saw some of the leading citizens, whom interest in forestry led to call upon me, and also examined with much appreciation the plantations and trees in and about the city, noting specially the growth of spruce firs, &c.

Leaving Dunedin on the 29th August, I noticed *en route* the treeless plains of Otago and the fine fertile lands through which the railway passes to Gore.

After spending Sunday at Queenstown, I next day visited the Upper Lake Wakatipu at Glenorchy, Diamond Lake, the foot of Earnslaw (9,260 ft.), making a hurried inspection also of the valley of the Dart, and the country of the fissure peaks, &c.; then returned to Queenstown, and on the 2nd September set out by steamer for Kingston, travelling thence by rail to Invercargill. No forests exist in all this country except limited patches on the Dart River, round the Cosmos Mountains, and bounding the lower slopes of the Southern Alps and about the foot of Earnslaw.

After a hurried visit to the Bluff, I set out next day from Invercargill to inspect the Woodlands Pine Company's mill, eight miles distant, being accompanied by the Forest Ranger, Mr. D. Campbell. The timber here is chiefly rimu, intermixed with some black-pine (matai); average output from the mill, 60,000 superficial feet per week. The forest or bush known as Seaward, consisted principally of red birch, mostly used for sleepers, and of very good quality, the trees in many instances attaining very large size. It is, however, now practically worked out, only a miserable blackened remnant marking the site of what once was a noble forest. It should, however, at once be proclaimed a State forest reserve, and an effort made to regenerate it. A gang of men to burn off rubbish and scrub would be required, and the reserve should be planted with totara, kahikatea, and rimu, 8 or 10 ft. apart. These would in time form a dense compact mass, and provide shelter for themselves. Then, if properly thinned out as necessary, the trees left would grow to become valuable for timber supply. By adopting this course it would be quite possible to regenerate any forest, which on account of proximity to populous centres would be of great value to the State. It is not necessary in burning off to clear away all *debris*, scrub, or forest growth. If the huge logs and heaps of rubbish are removed, the young trees can be planted beside fallen *debris* or stumps, and these, in decaying, would help to provide humus or soil for the young crop.

Though the bulk of the timber in the Seaward forest was red birch it included also rimu, totara, silver- and black-pine, and miro.