

The Big Forest, which extends from the Hope River to the source of the Buller at Rotoiti, and from there to the eastern side of the Tophouse Road, is essentially a beech-forest in its highest levels; in fact, beeches of one kind or other are the preponderating trees; but the forest possesses some features which must receive special attention.

The mountain-beech is restricted to the higher levels, and runs out below 4,000ft. Tooth-leaved beech ascends to nearly 3,000ft. In some parts numerous large patches of well-grown trees, from 30ft. to 40ft. clear in the trunk, and from 12in. by 12in. to 22in. by 22in., with occasional specimens of larger dimensions, may be found at an altitude of fully 2,000ft. Silver-beech appears to run out at somewhat lower levels than the tooth-leaved, and in this forest does not attain its largest dimensions. Entire-leaved beech is frequent.

In swampy places, at all levels above 1,000ft., patches of bog-pine or tarwood are common, but trees rarely attain the size of the fine specimens in the Te Anau. This is the only locality in which this plant was observed in abundance in the Nelson District, although I believe it is equally plentiful in the West Wanganui District.

Large patches of kawaka (*Libocedrus Bidwillii*) were scattered through the forest. The tree is termed by the bushmen and shepherds "bastard totara," and the timber has been utilized for telegraph-poles, house-timbers, posts, shingles, &c., for all of which it is highly esteemed. It affords better shingles than any other timber in the colony; the wood splits easily and evenly into very thin sections, and the shingles are rarely warped by the sun. It usually occurs between 1,200ft. and 2,500ft., and rarely attains large dimensions. Large patches will average not more than from 20ft. to 30ft. high, and from 12in. to 20in. in diameter. Trunks 2ft. in diameter may occasionally be seen, but so far as my observation extended are decidedly rare.

Large areas chiefly consisting of red- and white-pine are found in the lower parts of the forest, but beeches are the prevailing trees. In some parts the red-pine ascends to nearly 3000ft., but it is decidedly rare above 2,300ft. Totara and black-pine are unfrequent. Unquestionably the most valuable forests in the district are situated on the south-western boundary. Red-, white-, and black-pines, of long length and large dimensions, form dense forests above Arnold River, Bell Hill, and Crooked River. They resemble the best forests in the Westland District, and are not surpassed by any in the South Island. I was informed that totara occurred plentifully, but very little came under my personal observation.

A peculiarity in the application of the term "rimu" and "red-pine" in the Nelson District requires to be mentioned in order to prevent confusion. The red-pine of Southland and other parts of the colony (*Dacrydium cupressinum*) is here termed rimu exclusively; and the black-pine or matai (*Podocarpus spicata*) of the other parts of the colony is here termed red-pine.

THE TIMBER-INDUSTRY OF NELSON.

The Commisioner of Crown Lands for Nelson found unexpected difficulty in obtaining a return of the sawmills in operation in the district, so that I am compelled to fall back upon the summary published in the statistics of the colony for 1884, and supplement it with some details that came under my own notice.

The summary states that twenty-two sawmills are in operation in the district, and afford employment to 139 men and boys. The total output is stated at 5,260,000 superficial feet, but I think this is decidedly an under-estimate. The Takaka Valley is perhaps the most important centre of timber-conversion in Nelson. The level portion of the valley has long been freehold. It was formerly covered with fine timber—red-, white-, and black-pine, and totara. Much of it has been cut out for sawmilling purposes, and a large area has been brought under cultivation. In some cases the sawmiller has acquired the freehold; in others he purchases the timber from the owner, who is benefited by the purchase-money, and has his land cleared of all heavy timber into the bargain.

Six sawmills are now in operation in the valley, and produce about 3,000,000 superficial feet per annum; this itself is more than half the amount stated in the summary. A light iron tramway, nearly eight miles in length, and worked by steam-power, conveys the timber to the Port of Waitapu, from whence it is shipped to Nelson and other places. The rate of freight is 1s. 3d. per 1,000ft. per mile, with a further charge of 6d. per 1,000ft. for wharfage. The tramway was constructed by a local company, with some assistance from the Government; but it was found necessary to mortgage the property in order to obtain funds for its completion, so that at present the original shareholders are not receiving an adequate return for the capital invested; but it has unquestionably proved of great benefit to residents, as the trade could not have been developed without its construction. Three of the sawmills are directly connected with the tramway; timber from the others has to be conveyed to the nearest point by horse-power. At the date of my visit Mr. Petersen was cutting in splendid clumps of totara, which, however, was proving less profitable than was anticipated, owing to its having been allowed to stand after full maturity had been attained. Some of the trunks had a narrow cone of decayed heartwood ascending about 2ft. from the base, but not more than from 2in. to 4in. in diameter. The unavoidable waste was out of all proportion to the small quantity of timber actually decayed.

Mr. Baigent, the proprietor of a sawmill at Wakefield, states that he converts about 500,000 superficial feet of timber per annum, of which 400,000ft. consists of rimu, 50,000ft. matai and white-pine, 50,000ft. tooth-leaved beech. Totara is practically worked out in the Wakefield District. Mr. Baigent has thoughtfully preserved a few fine specimens, an example which might be followed in other districts with advantage to the colony.

Referring to the railway-returns for the year ending the 31st March, 1885, I find that 3,945½ tons of timber, equivalent to 1,893,720 superficial feet, passed over the Westport railway during the year. On the Nelson and Belgrove line 2,509½ tons, equivalent to 1,204,560 superficial feet, were