

covers about 2,500 acres, and is situated nearly in the centre of the district. Rankleburn Forest, on the Pomahaka, lies to the south-east; and still farther to the south are the extensive forests of Catlin's River and the Tautuku Bush, the area of which exceeds that of all other forests in the eastern district put together. A small forest area at Otepopo completes the enumeration, and, with the exception of certain water-reserves at Silverpeak and Blueskin, is the only piece of bush between Catlin's River and the Waitaki.

So far as natural forest is concerned, the interior of Otago, from the eastern side of Lake Wakatipu to the mouth of the Waitaki, and from Lake Hawea to the Mataura Falls, may be considered practically as a treeless district, the only natural forests being the small areas of Waikaia, Rankleburn, and Otepopo, with the water-reserves at Silverpeak. At the present moment no other district in the colony stands in greater need of plantations, or would derive greater benefit from their formation.

It will be advisable to state the chief characteristics of some of the principal forest-areas. I select for this purpose Dunton Forest, Dean Forest, and Catlin's River Forest.

#### DUNTON FOREST.

This grand beech forest is of very irregular outline, and occupies the area between the northern portion of Te Anau Lake and the Mararoa River. Its area has been estimated at fully 220,000 acres, but in all probability the proportion of first-class timber does not exceed 100,000 acres. This, however, can only be ascertained by a more detailed examination than I was able to make.

In nearly all parts the outskirts of the forest consist of mountain-beech (*Fagus cliffortioides*), here termed white-birch, usually of small size, the trunks being rarely more than 20ft. in length and 18in. in diameter. Penetrating this belt, which in some places is very thin but in others of considerable width, magnificent specimens of tooth-leaved beech (*Fagus fusca*) are to be seen forming the staple of the forest, although interspersed with patches and scattered trees of mountain-beech. In this district it is termed red-birch, but in other parts of Otago it is called black-birch. The trees are of good dimensions, trunks 60ft. long, squaring from 18in. by 18in. to 26in. by 26in. Still larger specimens were observed, but in some parts of the forest the dimensions stated would be a fair average. I have nowhere seen tooth-leaved beech of superior quality, and but rarely of equal excellence. Trunks 62ft. in length have been split into posts, rails, gate-heads, &c., without a single foot of waste in the entire length. This superior quality, combined with good dimensions, is found in great abundance. Mr. McQuillan, a shepherd, thoroughly acquainted with the district, assured me that tooth-leaved beech of equal dimensions extended along the margin of the lake for fully ten miles. I believe it would not be difficult to mark out the boundaries of a block from eight to ten miles in length by six in width, of which three-fourths would be covered with timber of the dimensions given.

Occasional specimens and small clumps of the silver-beech are mixed with the others, but, as already stated, tooth-leaved beech is by far the most abundant. In other parts of the forest the trees are of smaller dimensions, say 15in. to 18in. in diameter, with a few larger trees amongst them, but with comparatively few saplings, the trees being remarkably thick on the ground.

A striking proof of the value of the tooth-leaved beech is to be seen at the old Te Anau home-stand. The high paddock-fence was erected twenty years ago, and is now in good condition; the rails, 1ft. wide, are as good as when first used, but some of the posts, which are much too light for such heavy rails, are giving way from the great strain upon them. With a very small amount of repairs the fence would last another ten years; I have no doubt that it would have lasted for forty years had the posts been of proportionate dimensions to the rails.

On the margin of the forest the mountain-toatoa (*Phyllocladus alpinus*) sometimes attains large dimensions; trunks nearly 12in. in diameter were observed in several places.

Another endemic conifer (*Dacrydium Bidwillii*) attains its maximum dimensions in the Te Anau District, where it is unusually abundant, occurring in rather swampy parts of the forest in the vallies of the Eglinton, the Upukerora, Glen Echo, the Windy Valley, &c. It is termed "tar-wood" and "bog-pine" by the shepherds, and forms a dome-shaped symmetrical shrub, 6ft. to 12ft. high, often 20ft. or more in diameter. Its economic value is small except for firewood, but it will certainly come into general use for ornamental planting.

#### DEAN FOREST.

Dean Forest is a portion of the great Waiau Forest District, and extends from the mouth of the Waiau River westward along the shores of Te Waewae Bay for about ten miles, and for about the same distance inland. In some parts it comprises considerable tracts of level land; in others it contains deep hollows, and on the western side will probably be found of a somewhat broken character.

The northern margin of the forest consists chiefly of silver-beech (*Fagus Menziesii*), which in some places forms a belt two miles wide; the trunks averaging from 25ft. to 30ft. in length, and from 18in. to 30in. in diameter; everywhere associated with a luxuriant growth of young plants in all stages of development.

Inside the belt the beech is entirely replaced by pines of various kinds: matai, totara, red-pine, and white-pine. Much of the totara is of large dimensions; trees 20ft. to 35ft. long, squaring from 15in. by 15in. to 30in. by 30in., are not unfrequent in the lower parts, while larger specimens are occasionally found; and in certain places specimens were found of greater lengths, suitable for marine piles.

In many places black-pine (*Podocarpus spicata*) was plentiful, forming the prevailing timber, but was remarkable on account of the short average length of the trunks, which in many clumps did not exceed 20ft., although the diameter was above the average, ranging from 24in. to 72in.;