

Forty-Mile Bush, and again in the upper part of the Wairarapa Valley, covering large areas, and attaining unusual dimensions. In fact, scattered trees are found everywhere, and scarcely a mountain valley below 1,200 feet, however small, is devoid of one or more clumps or larger groups. Red and black pines are also plentiful.

29. In the Taupo District, wherever forest is found, unless in exceptionally dry situations, totara invariably enters into its composition, as at Oruanui, where it is abundant, Opepe, and other places above Lake Taupo. In this district the pokako and broadleaf are plentiful. The pokako, *Elæocarpus Hookerianus*, is a tree of remarkably neat habit, attaining a height of from 30 to 50 feet, with a trunk $1\frac{1}{2}$ to 2 feet in diameter; it produces a profusion of racemose, yellowish-white flowers. Its timber is used for inside work and for sundry purposes where durability is not required. The broadleaf, *Griselinia littoralis*, attains the height of 50 feet, with a short trunk 2 to 4 feet in diameter; the fine ovate, glossy, pale green foliage has a remarkably pleasing effect. The timber is very crooked, and often perforated by the larva of *Hepialus virescens*, but is extremely durable and highly valued for fencing-posts, house blocks, &c.

The highest portions of the ranges are covered with fagus forest, the entire leaved, tooth-leaved, and round-leaved beeches, which often attain large dimensions, the entire-leaved and round-leaved kinds being considered to afford the more durable timber. These trees will be fully described when treating of the forests of the South Island.

III.—Western or Red Pine District.

30. This district extends from the Mokau River to Palliser Bay, and is bounded on the north and east by the totara district. Its climate is not equally favourable to the development of a varied arboreal vegetation with that of the kauri and totara districts, and on examining its forests we find that the kauri, taraire, toro, ackama, the littoral tarata, the true toatoa, tawari, sandalwood, and other striking forms are no longer seen, while the pohutukawa and puriri are restricted to a very limited district on the coast of Taranaki.

31. Observations taken at New Plymouth yield the same general results with regard to temperature as those taken at Napier: the summer quarter at New Plymouth has a mean average temperature $1^{\circ}7$ below that at Napier, while the winter quarter is 1° higher—the annual mean being the same at both places. The rainfall, however, is greatly in excess of that of Napier, being 60 inches as against 36. The prevailing winds are S.W., N.E., and S.E. It is to this increased rainfall, coupled with the higher winter temperature, that we must ascribe the presence of the puriri and pohutukawa so much further to the south on the West Coast than on the East; the greater abundance and larger dimensions of the red pine are probably due to the same cause.

Observations taken at the Wellington Observatory give a mean annual temperature of $55^{\circ}5$ —for the winter quarter, $48^{\circ}7$; for the summer quarter, $62^{\circ}2$; difference between the hottest and coldest months, $14^{\circ}7$. Annual rainfall, 57.862 inches. Prevalent winds, N.W. and S.W.

The inland portions of the red pine district will probably be found to possess a much lower temperature and a heavier rainfall than that prevailing at Wellington, while a large area on the coast will be characterized by a greatly reduced rainfall and lower winter temperature, these peculiarities being most strongly marked in the lower portions of the valleys of the Rangitikei and Manawatu. Observations at Wanganui show a rainfall of only 38.420 inches; but even this is in excess of the annual rainfall at Carnarvon, on the Rangitikei River. The coastal portion of the red pine district, between Wanganui and Kapiti Island, is probably the driest locality in the North Island.

32. The red pine, *Darydium cupressinum*, of the North Island, is usually from 60 to 100 feet high, with a trunk from 3 to 5 feet in diameter, tapering more rapidly than the kauri, but less than the totara. The bark of mature trees presents a close resemblance to that of old specimens of the pinaster, or Scotch fir, and becomes detached in large heavy flakes. The young branches are pendent, not simply drooping, but hanging in parallel lines to the stem, and when young present a peculiarly graceful appearance. The leaves are of a bright-green colour, very short, subulate, and more or less imbricating. In exposed situations it throws out branches at a comparatively short height from the ground, but in sheltered places and on rich bottoms the branches are comparatively few and weak, and the trunk attains a great length. It occurs from the sea level to nearly 2,000 feet, being more frequent on high ranges than the totara. The timber has been generally used for building purposes, bridges, &c., and for furniture, but cannot be commended for durability. When sound, it is stronger than totara, but inferior to kauri. At the present time it is, perhaps, more largely used than any other timber in the colony.

33. In this district totara is of frequent occurrence, either more or less scattered in mixed forest, or forming patches or groves of considerable extent in the more open valleys, but it does not occur in nearly so large quantities as the red pine.

34. Incidental tracts or blocks of entire-leaved, round-leaved, and tooth-leaved beeches are plentiful on the higher parts of the ranges; the round-leaved beech descending to the sea level. Tawa, white pine, black pine, miro, hinau, and titoki also occur as incidental blocks or clumps, with scattered trees of ngaio, pahutuai, pukatea, rata, rewarewa, and maire tawhake.

35. A large area in the Manawatu and Rangitikei Districts is occupied by white pine of large dimensions, the higher land being clothed with red pine and tawa. Patches of black pine and miro are of frequent occurrence, with totara in the valleys.

The black pine, *Podocarpus spicata*, or matai, is a handsome tree with cinereous bark. It attains the height of 50 to 80 feet, with a trunk 2 to 4 feet in diameter. The leaves are small and rather close-set, resembling those of the European yew, but are smaller and glaucous below; the fruit is a bright red drupe. The timber is hard and extremely durable: well adapted for general purposes.

The miro, *Podocarpus ferruginea*, closely resembles black pine, but usually attains greater dimensions, and may easily be recognized by the larger leaves, which are never glaucous below. The timber is of a lighter colour than black pine and less dense. It is not durable, but is valued for inside work.