

It must surely be a suicidal policy to neglect such precautions—of value on other grounds also—as will rehabilitate where necessary, and in every case jealously preserve the natural advantages both for timber and scenery so bountifully bestowed on the frontages to these exquisite lakes, rivers, and sounds.

For reforestation, the most suitable timbers are undoubtedly the native beech (which is easily propagated from seed), the blue-gum, and the better-class pines and firs, such as *Pinus excelsa*, *P. strobus*, *P. laricio*, *Abies smithiana*, *A. menziesii*, *Picea balsamea*, *P. nordmanniana*, which could be grown in fenced enclosures to protect them from stock, with fire-lines or breaks, say, every 20 chains.

The banks of the Wanganui should also be most carefully preserved. Should this territory—now in Native hands—fall into those of the pastoralist or small grazier, æsthetic effect will speedily be sacrificed to the desire for more grass, and the forest-clad cliffs, the mossy slopes, and the fern-tree gullies of this, the Rhine of New Zealand, will soon be shorn of their natural attraction. Let the lover of sylvan beauty imagine the banks of this noble river denuded of foliage, and in its place miles upon miles of blackened stumps, and use his best endeavours to prevent such sacrilege. When these river-lands fall into the hands of the Government, ample provision to avert such a calamity can be made by reserving frontages on both sides for some distance back, thus securing to future generations for all time a continuance of the wild and beautiful native flora in variety and abundance as at present. Moreover, the Wanganui is peculiarly the favourite home of the Maori race, and has thus an historical interest. Its legends, indeed, like those of the Rhine, of hoary antiquity, will long outlast the extinction of its former possessors. Such a river, with such a history, surely deserves a better fate than to be robbed of its most striking features by the fire-stick—its inevitable destiny unless the authorities step in to save these frontages, which would form the grandest national park in the Southern Hemisphere.

Then, again, perhaps nowhere in New Zealand is the expenditure of State funds for improvements justified than in the country about the lakes district—Taupo, Rotorua, &c.—and it is pleasant to observe the efforts already made at Whakarewarewa by Mr. Malfroy, the engineer in charge, in judicious planting, and in the construction of roads to enhance the attractiveness of this district. As a rule, the country above the hot springs is uninviting, but by clearing off the manuka scrub and systematically planting more ornamental and useful trees, it could be made both more attractive and less dangerous than at present.

Whakarewarewa, Waiotapu, and other places offer splendid fields for the work of the landscape gardener, but so much public money might easily be wasted by the adoption of conceived plans and haphazard methods, that the greatest care should be exercised to see that such operations as are necessary in these and other places should be entrusted only to first-class men. For instance, a common error in Australia is that of planting trees too close to each other; and for such landscape purposes as those above referred to special pains are necessary to avoid this, and to so arrange the trees that when matured they shall not hide the natural beauty of configuration which should form the back-ground of each view. Trees of strong growth should therefore be planted only in small numbers and at long distances apart, and the intervening spaces filled in with shrubs of graceful shape and handsome foliage.

I note here my regret that since leaving New Zealand the death has been announced of Mr. Malfroy, in whom the Government has lost an intelligent and useful member of the service.

In planting the country of the hot springs it must not be forgotten, of course, that the trees must be so placed as to be beyond reach of the destructive influence of sulphurous gases. The mud-covered (papa) areas about Tarawera might even more easily be reforested. Here a liberal sowing of beech and blue-gum seed on the slopes and foothills would very soon insure a vigorous forest growth, and in course of time restore the sylvan beauty which distinguished this region prior to the great eruption of 1886.

#### CULTIVATION OF THE WATTLE AND OTHER TREES FOR TANNING MATERIAL.

This subject is of the greatest importance, and the selection of trees and plants best adapted to the production of tannin must materially increase the commercial progress of New Zealand. At the present time the barks of several kinds of trees are used for tanning. In New Zealand the beech is perhaps in most general use. Different species vary in the strength of the tannic acid, and as a general rule the *Fagus fusca* will be found the best for the tanner. This tree affects low altitudes, flourishing most in the littoral regions of the colony.

Information as to beech-bark is scanty, as it is used principally by local tanners, who probably mix with it Australian wattle-bark. For heavy leather there can be no question in comparing these, the wattle being immensely superior, though beech is the better for light and delicate skins, furs, &c.

The tanekaha (*Phyllocladus trichomanoides*) is also valuable for the tannic properties of its bark, which is used with remarkable success to preserve canvas or sail-cloth from the ill-effects of sea-water. A Tasmanian species, *Phyllocladus rhomboidalis*, is also used for the same purpose with excellent results. Though beech-bark is extensively used locally, however, it has never become an article of general export.

Next in importance for tanning purposes are the *P. glauca*, and *P. alpinus*, the *trichomanoides* (celery-leaf pine) being much more generally used than either. Beech- or birch-bark has been exported to London, but its lower grade tannic properties must always subordinate it to other barks, though for some purposes, such as tanning glove-skins, it may yet attract attention, and become an important article of export.

There are other tanning barks, but these as yet are practically untried.