

to prevent these animals becoming too numerous. The late Royal Commission on Forestry gathered sufficient information to be convinced that deer are extremely detrimental to native forests in this country. The other large lakes of New Zealand have been formed by the erosive action of huge bodies of moving ice or by volcanic action. Waikaremoana has had an altogether different origin, and has been formed by an immense fault in the stratification of the country as it was after its first elevation from the sea. The greater part of the drainage area is covered with beech (birch) forest with its usual associates, plus the tawari (*Ixerba*); and near Waikare-iti the two celery-pines *Phyllocladus trichomanoides* and *P. glaucus*. On the south side of the lake there is a small area of rimu (red-pine) association. Though this locality has no volcanic or eruptive rocks, it has been buried beneath showers of fine volcanic ejectamenta (largely pumice), which probably have been expelled from Taupo or one of the many volcanoes in that district; and it is this that forms the upper layers of the soil, and is responsible for its small fertility. The forest on the area I suggest should be acquired is practically all beech (birch), and being so far from rail or water access it has now no milling-value; the red-beech (*Nothofagus fusca*) is the dominant tree. Native birds, I am glad to say, are still abundant in Waikaremoana district; bell-birds (korimako), tuis, pigeons, kakas, tomtits, fantails, parrakeets wild duck, and black swan were seen there.

The chief of other scenery-work that I did were inspections and reports on the Patea River, Wanganui River Trust lands, Day's Bay bush, Owhango, Okoia, and Wilton's Bush. I also inspected and reported on forest reserves at Ohura, Matiere, Whangamomona, and Pakiri.

I also made proposals and prepared plans for the extension of Tongariro National Park, so as to include the beautiful forest abutting on to the railway at Erua and Karioi, the forest behind Horopito and Ohakune, the forest gorges on the east side of the volcanoes, and also the hot springs at Ketetahi. The proposal takes in a very large area of country, but its altitude is from 2,400 ft. to 5,000 ft., much of it is open scrub or tussock country, the forested area is practically all beech (birch), and none of it could be reasonably classed as suitable for successful farming. If this park is extended and developed as recommended, it would not be long before it became the most attractive health and tourist resort in the whole of Australasia. The air of this volcanic plateau is wonderfully invigorating, and the active volcanoes, the moribund volcanoes, the dead volcanoes, the hot springs, the huge gorges, the waterfalls, the glaciers, the lakes, and the beautiful and varied plant-life of the alpine levels and lower forests are all features that leave an ineffaceable impression upon one's memory. This park should also be kept as a natural museum to preserve the different plants and plant associations that now exist on the highlands of the North Island; and on this account I think it inadvisable to allow there the establishment of any aggressive exotic plant that is likely to kill out the indigenous plants, and possibly spread to be a pest in the poorer farming-lands of the surrounding districts. One of the European heathers has already become a pest, as bad as tea-tree, in the Pirongia district.

It is gratifying to find that the people of Wellington, assisted by Mrs. M. A. Williams and the Government, have been able to secure Day's Bay Bush as a public park. It is already a most popular pleasure resort, and if adequate measures are taken to preserve its natural beauties its popularity will be sure to increase. From the botanical point of view it is specially interesting, as being the only locality in the North Island where the beech (birch) forest descends to sea-level.

All the Native lands proposed to be acquired for scenery-reservation on the Wanganui River have now been surveyed off, Messrs. Bogle and Wall, private contract surveyors, having last year completed the surveys of about fifty miles of river frontage. There are, however, several surveyed areas that have not yet been gazetted as scenic reserves, and it is desirable that this should be done without delay, as settlement is fast increasing up this river, with the consequence that the acquisition of the land is thereby complicated and made more expensive. The preservation of the forest on the Wanganui River is a matter of national importance, and concerns every citizen of this Dominion. There are few New-Zealanders that do not boast of the transcendent beauty of this river, which the most-travelled admit to be the finest sight of its kind in the whole world. A Russian traveller whom I met at Pipiriki told me the Wanganui surpassed in beauty all the rivers he had seen, and he had been up the Amazon in South America, all the big European rivers, and most of the navigable rivers in Eastern countries. "It is no compliment," he said, "to call the Wanganui 'the New Zealand Rhine.'"

Fires.

There was not much damage reported from fires last year. I saw three or four patches on Tongariro Park that had been burned (probably by men mustering sheep). Burning in this kind of country is particularly to be deprecated, as not only is the fertility (already very low) of the soil much lessened, but when scrub and tussock are burned off here they are succeeded by desert which is incapable of carrying a plant growth for a considerable number of years. I am sorry to say that through the foolish action of some campers at Waimarimo burning off the tussock a fire spread to and has temporarily spoiled the appearance of the beautiful natural margin of bush close to the railway-station.

A Maori felled and burned off some bush on a scenic reserve on the Wanganui at Pipiriki, but as he was under a misapprehension as to his legal rights no prosecution took place.

From being allowed for so long to burn off the bush on State lands without punishment people have got into the way of looking upon such acts as being either permitted or of no great consequence. It is now time that they were made to realize that State forests and scenic and climatic reserves are of very great value, and that damage to them, either by fire or axe, will be severely punished. It is, of course, difficult to catch an offender *in flagrante delicto*, and on that account also, if he is caught, he should be severely punished as a warning to others not to commit a similar offence.