

south, with its open undergrowth and bright-green foliage, looking like delicate lacework, is equal to the same association as found in the Cold Lakes region. On the north of Tongariro is a forest of quite a different type, with the thin-barked totara (*Podocarpus Hallii*) as the leading tree, while the beeches (*Nothofagus*) are absent.

On Tongariro the alpine flora is richer than elsewhere in the park, the combination of the plants more meadowlike. There is the rare buttercup (*Ranunculus nivicola*); and the beautiful white gentian (*Gentiana bellidifolia*), its flowers marked with thin purple lines, is so abundant in March as to dot the slopes with patches of snowy whiteness.

INTRODUCED ANIMALS.

We have attempted already to explain how important it is, so far as the plant-life is concerned, that no grazing-animals should have access to the park. At the present time there are a few wild horses, certain cattle, numerous hares, and three or four sambur deer recently liberated, but as yet giving few or no signs of their presence. The cattle are said to belong to the Maoris, who indeed spent some time during our visit earmarking such as they could catch. On the northern slopes of Tongariro the pasture is much richer, and here the Maoris' horses and other stock, probably, are wont to graze, entering also the fine totara forest, where a certain amount of damage has already been done to the undergrowth. So, too, when the lands alongside the proposed south and east boundaries shall have been settled, there will undoubtedly be incursions of the settlers' stock, just as happens at the present time in the Egmont National Park, although this latter is fenced. Fencing, however, for the Tongariro National Park is an altogether too expensive remedy, and we do not dream of suggesting it. Regarding the future safeguarding of the park some suggestions are offered under another head.

FIRES.

Fire is much more to be dreaded than the incursion of grazing-animals. So long as these latter do not assume formidable proportions but little change of moment will accrue. But with fire it is different, and a plant association once burnt, now that introduced plants are established in New Zealand, cannot exactly reproduce itself, while in the case of forests they may be wholly destroyed. The recent leasing of the high land adjoining the National Park on the east for a sheep-run—this county having previously been unoccupied—will most certainly be a perennial source of danger to the vegetation, and consequently to the scenery. If it be possible to cancel the lease, or to restrict the area occupied, we would most respectfully suggest that this step be considered.

ACCOMMODATION FOR VISITORS, TRACKS, ETC.

At the present time there is only one road available to the park for the ordinary visitor, that from Waiouru to Tokaanu. So long as the coach-service exists this route will be of prime importance. By it the Mountain House is distant from Waiouru, on the Main Trunk line, twenty-three miles, the final four of which is by an excellent track leaving the main road near the nineteen-mile peg. Thus a visitor even now can leave Wellington at about 8 a.m. and arrive at the Mountain House by 12 or 1 p.m. on the following day. From this centre all the volcanoes can be attacked. A long day will enable Ruapehu to be ascended and the crater-lake visited; five hours, or rather more, will suffice for Ngauruhoe; and, finally, by a track now being formed, the whole Tongariro Range can be crossed to the hut below Ketetahi in six or eight hours, the Red Crater and Blue and Green Lakes being visited *en route*. Ketetahi also can be reached from the Hot Lakes *via* Tokaanu, but the distance is much greater.

When the Main Trunk line is completed there will, however, be a demand for a more rapid route to Ruapehu from the line itself. Two courses recommend themselves. From Waiouru one can ride for twelve miles along the road, then, crossing the sandy Onetapu Desert for three or four miles, the mountain may be ascended from near the source of the Wangaehu. Also, close to Rangataua, on the railway-line, is the Mangaehuehu River. This flows in almost a straight line from its glacier. From the terminal face of the ice to the railway-line is some nine miles and a half, eight of which are through the beech forest. This latter is for the most part very open, and a track could be cut near either bank of the river at a small expense. The slope is remarkably gentle and even, while there are only one or two gullies, and these of little moment. Such a track would be easily available for horses, and by its means a visitor could reach to an altitude of 5,000 ft. or more in three hours from Rangataua. Then, a spur free from snow leads to one of the main peaks of Ruapehu.* As for the final portion of the spur, we can give no definite information, but, in any case, such a track as suggested would be a great boon to any one wishing to see glacier scenery, and to investigate the higher slopes of the mountain, even leaving out of consideration any ascent of the final peak. Of course, a hut just above the forest-line would much enhance the value of this route, which is by far the simplest and shortest as yet proposed for an attack on the mountain. Also, it leads through beautiful forest scenery, the deserts not being reached until the very high land is gained. Possibly, too, from Horopito an easy track to the summit could be found, but unfortunately we had no time to investigate this point. As for the Waimarino Plain, although there is a track thence to the northern end of Tongariro, and a kind of track over the central saddle, the distance is too great to allow competition with either the Rangataua, Waiouru, or Mountain House routes.

* Dr. Marshall informs us this is the easiest spur by which to climb Ruapehu and that ladies have ascended by this route.