mountains of Ruapehu, Ngauruhoe, Tongariro, and Te Mari. For this purpose, Dr. L. Cockayne, the eminent botanist, was requested to visit and furnish a report on the botanical features of the park, whilst Mr. E. Phillips Turner (Inspector of Scenic Reserves) was at the same time instructed to make a topographical survey of the area; and these gentlemen were also asked to submit a joint report on the whole subject, setting out detailed recommendations as to any required alteration or addition of area, the development of the scenic and special features of the park, and the need for improving the present access thereto and accommodation thereon. Their joint report is appended.

Regulations for the better control and protection of the park were prepared during the past year and published in the *New Zealand Gazette* of the 12th December, 1907, on page 3490. For the purpose of commemorating the name of the original donor of the nucleus of the reservation, one of the three divisions of the park was called "Te Heuheu Division," the other two being called respectively the Ruapehu and Waimarino Divisions. The Trustees were formed into a Board, and the necessary regulations made for the meetings and transaction of business.

The first meeting of the Board was held in Wellington on the 20th May, 1908, when the joint report of Dr. Cockayne and Mr. Phillips Turner was read and approved, and a resolution passed recommending the Government to introduce a Bill empowering the area of the park to be increased in accordance with the recommendations contained in the report, and enabling the reserve to be developed and managed in a manner best calculated to attract visitors and at the same time preserve the unique flora of the locality. A Bill to this end has therefore been prepared and will be submitted this session.

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## REPORT BY DR. COCKAYNE AND MR. TURNER.

2nd April, 1908.

### Introductory Remarks and General Principles.

The Tongariro National Park covers an area of about 62,300 acres. The present boundaries consist of the circumferences of three circles drawn round Tongariro, Ngauruhoe, and Ruapehu respectively, and having a radius of three miles for the two former, and four for the last-named. These circles are joined by a narrow neck of land two miles wide, occupying the saddle between Ruapehu and the other volcanic mountains.

The above circular boundaries we consider, after a careful examination of the country, and with a knowledge of the purposes for which the park is intended, to be both inadequate and inconvenient. For instance, at the present time the park presents the curious anomaly of being, except in one or two places, practically without a tree. Also, the southern and western boundaries, at any rate, pass over high spurs of Ruapehu at an altitude of 4,000 ft. and more. Even the Mountain House, near Ruapehu, together with the adjacent patch of forest (and this at an altitude of 3,700 ft. and more) are beyond the confines of the park.

But in order to make more plain our contention *re* the inadequacy of the park it is necessary to discuss briefly the requirements of such a domain. In the first instance the Tongariro National Park was set aside because of the presence of certain more or less active volcanoes, and because such were not only a valuable scenic possession for any country, but that they formed the climax, as it were, of the celebrated thermal region of the North Island. Correlated, too, with the height and extent of these volcanic ranges was much interesting scenery of a varied character. Scenery, however, does not depend merely upon geological or geographical characteristics. Were this the case, a monotonous uniformity would distinguish the whole earth. But such is not the case; each region, on the contrary, has its own peculiarities, these depending not on the contour of mountain or valley, but upon the plant covering of the place in question. Therefore the more special the vegetation the more distinctive the scenery. And nowhere does this dictum more carry weight than in New Zealand, where the vegetation is unique. Volcanoes, geysers, glaciers, lakes, and gorges are to be seen elsewhere, but our forests, meadows, and even deserts stand alone. Thus it follows that in all scenic reserves, and in those larger ones called "national parks," the preservation of the vegetation should be the matter of first consideration, and no area gives an accurate picture of the district of which it forms a portion if it does not contain typical examples of all these combinations of species called scientifically "plant associations" or "plant formations." Therefore in our examination of the district we have sought to include in the suggested new boundaries a sufficient number of characteristic examples of the vegetation of the region.

As originally constituted, the park was made up chiefly of steep slopes and deep gullies covered with volcanic cinders and ash destitute of all plant-life. This state of affairs our proposed new boundaries would altogether change. For instance, if our proposals are ratified, there will be various fine pieces of beech forest, the mountain-beech (*Nothofagus cliffortioides*) on the east, the toothed-leaved (*N. fusca*) and the silver (*N. Menziesii*) on the south-west and in certain deep gorges not far from the Tokaanu Road. There will also be fine collections of alpine plants, embracing such remarkable species as *Dacrydium laxifolium*, the smallest member of the pine-tree family in the world; the whipcord veronica, *V. tetragona*; the handsome *Veronica lævis*; the charming eyebright, *Euphrasia cuneata*; mountain-daisies (*Celmisia*), and many other plants found nowhere but in the mountain fastnesses of New Zealand. One plant especially deserves mention, for so important is it that the red or purple hue of its stiff recurved leaves gives the characteristic stamp to the landscape, lighting up even the barren and otherwise gloomy scoria deserts. This is *Dracophyllum recurvum*, a low-growing scrub peculiar to the backbone chain of