

Department of Lands,
Wellington, 1st June, 1909.

SIR,—

I have the honour to submit herewith report on a botanical survey of Stewart Island, carried out during the months of September and October, 1908, by Dr. Cockayne, under your instructions.

The fact that the vegetation of Stewart Island has not as yet been interfered with to any appreciable extent by man, and so may be regarded as truly virgin, gives to this report a special interest and value. The progress of all settlement unfortunately carries with it the destruction, either partial or complete, of our native fauna and flora, and while this cannot but be regretted, the loss may be considerably lessened by obtaining, wherever possible, accurate accounts by qualified observers (as in this case) of areas of country not yet affected by the march of civilisation.

Towards this end the present report is a valuable contribution.

I have, &c.,

WILLIAM C. KENSINGTON,
Under-Secretary.

The Right Hon. Sir J. G. Ward, P.C., K.C.M.G.,
Minister of Lands.

PART I.—INTRODUCTION.

A. GENERAL REMARKS.

THIS report is a continuation of those already published by the Department of Lands and Survey (See Nos. 23, 25, and 26 in Bibliography, Part VIII), which seek to put on record, before it is too late, by means of photographs, maps, and descriptions, the general aspect of the vegetation of typical or specially interesting districts, and to supply details regarding the plant formations of which it is composed, the distribution of the species, their life-forms, and other botanical matters of general interest.

Stewart Island is, so far as its natural history is concerned, one of the least explored portions of the New Zealand biological area. No detailed account has been published regarding its vegetation, nor concerning the conditions under which its plants grow. And yet it is botanically a region of special interest owing to its geographical position, isolation, climatic conditions, and geological history. Moreover—and this is a very important matter indeed—its vegetation is absolutely virgin, except in a few spots. This is a great contrast to the mainland, where fire and the axe have driven primitive New Zealand far beyond the reach of most, and where many interesting plant formations and botanical phenomena are gone for ever, unstudied and unknown. But in Stewart Island, a journey of two hours merely from the Bluff, is to be seen a primeval land with meadow or forest exactly as Nature planted, and stocked as abundantly with our native birds, so fast-vanishing elsewhere, as was New Zealand in the pre-European days. Still at night-time does the kiwi steal forth from its shelter, and probe the peaty mountain meadows in quest of worms. Pigeons in their lustrous garb, high in the tree-tops, feed on the red miro drupes. Tuis, less timorous, haunt in springtime the settlers' orchards in quest of honey from the blossoming trees. In marshy ground, the sombre fern-bird utters its monotonous call, making short flights above the sedges.

The botany of Stewart Island offers many interesting problems for solution. The fact of its comparatively small size, but most varied land-surface, gives an opportunity for study under simpler conditions than in the North or South Islands. The limited distribution of many plants; the occurrence of numerous alpine plants at sea-level; the variation of a certain species according to its surroundings; the relationship between the Stewart Island flora and that of the neighbouring mainland on the one hand, and of the subantarctic islands on the other; the vegetation of an ancient strait, or of the accompanying inland dunes: these and many other problems which are dealt with are matters of interest not merely for New Zealand botany, but for general plant-geography.

Besides the purely botanical portion of the report, which I have attempted, apart from technical details, to make intelligible for the non-botanical reader, I have added sections dealing with the bird-life and the scenery, recognising that this report is concerned not only with an interesting scientific region, but with what will be in no very distant future one of the most important watering-places in New Zealand, and perhaps in Australasia.

I must express my great obligations to the following for much valuable assistance: Mr. R. McNab, M.A., LL.B., by whose direction, as Minister for Lands, this work was carried out, and who has supplied the valuable section dealing with the early history of the island; Mr. W. C. Kensington, Under-Secretary for Lands and Survey; the Rev. D. C. Bates, Government Meteorologist; Professor C. Chilton, D.Sc.; Mr. F. G. Gibbs, M.A., to whom I am indebted for several fine photographs; Mr. R. Speight, M.A., B.Sc., who has identified certain rocks and given advice on geological matters; Professor L. Diels (University of Marburg); Drs. W. F. Brotherus, G. Lindau, and F. Stephani, who have identified the cryptogams*; and Messrs. R. M. Laing, M.A., B.Sc., J. Crosby-Smith, F.L.S., W. Traill, and A. Traill: finally, I must specially thank Mr. J. W. Murdoch, without whose aid the section on bird-life would not have been written, and who for several years has generously supplied me with information and botanical material.

* The identifications of the cryptogams arrived too late for embodying in this report. I am publishing the list in the volume of the Transactions of the New Zealand Institute for 1909.