

SAND-DUNES AND DRIFTING SANDS.

The passing of "The Sand-drifts Act, 1903," has aroused considerable interest in the above subject.

In response to Circular No. 584 of the 12th August last, reports have been obtained from the Commissioners of Crown Lands as to all areas of drifting sands throughout the colony. It is satisfactory to note that the total area is comparatively limited; that it is found almost entirely adjacent to the coast-line; and that, generally speaking, its encroachment is not of a serious character.

The following is a statement of the position of the several areas so affected:—

There is almost a continuous strip of sand-dunes about eighty miles in length from Cape Maria Van Diemen to Hokianga Harbour. The breaks are at Ahipara Bay and a little north and south of the Herekino River. The next locality affected extends from a point opposite Aratapu, on the Wairoa River, thence following the sea-shore to the Kaipara entrance, and continues southwards to the Waitakare River, a distance of about seventy miles. Proceeding further south along the west coast there is an area sixteen miles in length immediately to the northward of the Waikato River; then there are patches at Whangaroa, Aotea, and Kawhia Harbours, and south of these at the North and South Taranaki Bights; and on the shores of Cook Strait and Porirua Harbour there are sand-dunes and drifting sands more or less.

Taking now the east coast of the North Island, we find that from the North Cape to Rangaunu Bay, a distance of thirty-six miles, there are sand-dunes at nearly all points along the shore. The same is a feature of the lands contiguous to the Bay of Plenty for a distance of ninety miles from Katikati to a point eastward of Opotiki. There are areas similarly affected at Poverty Bay and in the vicinity of the Mahia Peninsula, with small strips at Waimarama, Porangahau River, and Cape Turnagain, whilst there are limited areas of sand in the vicinity of the Hutt and Wellington.

The chief portions of the South Island where sand-dunes are to be found are at Cape Farewell, and the great sandspit which extends fourteen miles to the eastward therefrom. Small areas are also to be found at West Wanganui, at the south end of Golden Bay, and at Rabbit Island, near Nelson. About twenty miles of the coast from Ure River to the Clarence River, in the Marlborough District, is more or less effected. There are also small areas southward of the Kaikoura Peninsula and at Gore Bay, Cheviot. Twenty-two miles of the coast, from the Ashley River to Sumner, are characterised by low shores, sand-dunes, and drifting sands. The north-east shore of Lake Ellesmere, and for twenty miles along the bar which separates that lake from the ocean, are also sand-drift areas.

The other points on the east and south shores of the South Island affected in this way are Otipua Lagoon, north of Timaru, and between Taiaroa Head, Otago Peninsula, and the Taieri River, a distance of thirty miles. Newhaven Harbour, between Waikawa Harbour and Orepuki, in the Southland District, contains small areas and strips of land contiguous to the ocean affected in a similar manner. A peculiarity in the Otago District is that sand areas exist remote from the sea-shore at Tarras, Lowburn, Cromwell, Clyde, and Alexandra.

In response to inquiries made by the Hon. the Minister for Native Affairs, Mr. A. S. Hitchcock, Acting Agrostologist to the United States Department of Agriculture, was good enough to forward an interesting pamphlet upon the subject of sand-binding grasses and operations to counteract the drift of sand-dunes, wherein he affords particulars of the reclaiming processes, the fencing, and the various plants and trees which are utilised in the United States in coping with sand-drifts. It is evident that the sand-drifts in both countries are very similar, and in America are not only successfully prevented from spreading, but are also converted into forests and fertile land, to the great advantage and benefit of the State and the agricultural industry.

Mr. Hitchcock expresses great interest in the conditions prevailing in New Zealand upon this subject, and is about to be furnished with plans and full information as to the areas, localities, and peculiarities characteristic of sand-areas in this colony. By the mutual exchange of ideas and reports as to the success or otherwise of operations, it is believed that the whole of the sand tracts in this colony will ultimately be reclaimed, converted into forest, and subsequently prove a benefit to the Government and community, besides altering the whole face of the landscape and adding to the beauty thereof.

The more important and interesting points in Mr. Hitchcock's pamphlet, together with the reports of the Commissioners of Crown Lands and Rangers, will be published in a separate report.

By the courtesy of Mr. Gordon, of the Native Department, particulars regarding the manner in which sand-areas are utilised and reclaimed in the various Continental and foreign countries were also furnished to the Department, and help to still further assist the Government in dealing with similar lands.

MEDICAL ASSISTANCE TO SETTLERS.

Amongst the varied monetary assistance which the Hon. the Minister of Lands is called upon to render none is more helpful to the settlers scattered throughout the far back portions of the