

proper; and of sand-dunes of much more recent date, still bare of vegetation, and drifting inland with every gale. These recent sand-dunes are heaped up against the older ones, and occupy a considerable portion of the coast-line, especially on the western side, where they form a continuous belt stretching from Ahipara to within a short distance of Cape Maria van Diemen. Both the swampy deposits and the consolidated sandhills contain large quantities of kauri-gum, which for several years has given employment to a considerable number of gum-diggers.

"The arrangement and mode of formation of these Recent deposits show that the northern extremity of New Zealand has been subjected to considerable fluctuations of level since the close of the Tertiary period. Before the formation of the older sand-dunes the greater portion was under water. The high land at the southern side of the entrance to Doubtless Bay was then the North Cape of New Zealand, and from it a shallow sea stretched westwards to Ahipara, and northwards beyond the present North Cape. The hills at Cape Karakara, now constituting the north-west side of Doubtless Bay, probably formed one or two little islands in this sea. Further north Mount Camel stood out as another island, while between Parengarenga and the North Cape quite a little archipelago existed. Still further to the north the Three Kings Islands probably reared their higher peaks above water. This period of depression was followed by elevation, and elevation to such an extent that the land stood much above its present level, and probably extended as far as the Three Kings. Magnificent kauri forests covered most of the country, flourishing where now nothing but swamp and lake exist. Then the land sank to somewhere near its present level, and the first line of sandhills was formed—now consolidated and covered with vegetation. Then, after a considerable pause, and possibly after a still further subsidence, the younger sandhills came into existence, and the country gradually assumed its present aspect."*

A SHORT DESCRIPTION OF THE GUMFIELDS.

The most northern area of gum land in New Zealand is that called Parengarenga, containing about 80,000 acres, a considerable portion of which is under process of development by the Parenga Gumfields Company (Limited). The original owner of Parengarenga was Mr. Samuel Yates, who was one of the first exporters of kauri-gum from New Zealand. This field has always been known as one producing the best-known qualities of both white and brown gum. These good-quality gums are known to have extended nearly twenty miles to the southward to Ngataki, whilst that extensive area from Ngataki and extending to the Rangawahia Peninsula, and comprising Hohoura, Opoe, Rotoroa, Lake Ohia, Puheke, and other gumfields, is remarkable as producing for the most part all the poorer classes of gum.

The Parenga gumfield has no extensive swamp areas, the gum being found on the sandy hillsides and the sandy flats. Within the confines of the flats are small patches of gum-bearing swamps known by the diggers as "basins." The depths at which the gum is found varies from 6 in. to 2 ft. 6 in. on the hillsides and from 2 ft. to 6 ft. in the basins, while in some of the depressions between the hills the best class of white gum and some of the poorer class are found at depths of from 10 ft. to 14 ft.

From the trig. station at Ngataki can be seen that vast expanse of gum-bearing country stretching forty miles to the southward to Ahipara Bay. Over all this large area there is no elevation exceeding 300 ft. above sea-level. Skirting the west coast is a sandy waste varying in width from one to three miles, and further inland are low sandy ridges with a scant covering of vegetation, and between the hills are the large swamp areas which contain the gum-deposits included in the kauri-gum reserves of Hohoura, Opoe, and Rotoroa, comprising an area of over 80,000 acres. It is on these particular fields that the majority of the workers now engaged in the gum-digging industry live and carry on their operations. This is no doubt owing to the increased demand and enhanced value which has prevailed for the poorer grades of gum during recent years.

* "Transactions of the New Zealand Institute," Vol. 29, pp. 336-337.