

*Grecian Archipelago.*—In the island of Argentiére, anciently called Cemoli, silver mines were formerly worked in a trachytic conglomerate.

*Hungary.*—The gold, silver, and lead mines of Schemnitz, Kremnitz, &c., are in trachytic rocks that have lately been proved to be of Miocene date.

*Algeria.*—In the mines of Mousäia, in the Lesser Atlas, copper is worked in tertiary trachytic porphyry.

*Cuba.*—Rich and abundant copper ores are worked at Cobre, in tertiary basaltic rocks.

*Mexico.*—A trachytic porphyry of a late age is very rich in gold and silver, most if not all the mines being situated in it.

*South America.*—Many of the mines in Chili and Peru are situated in trachytic porphyry of unknown age.

*California.*—Volcanic rocks are common in California, and it is very probable that future research will add many of the mines, including the famous Comstock Silver Lode, to the list of those worked in volcanic rocks.

If now we place before us a geological map of New Zealand, we shall see that in the South Island a large district, occupying probably nearly two-thirds of the Island, and extending from Nelson to Stewart's Island, is composed of granite, schists, and metamorphosed rocks, answering in every respect to the description given of the first and most important class of mining districts, and we know that already in this district have been found—

|               |     |     |     |                                       |
|---------------|-----|-----|-----|---------------------------------------|
| Manganese ... | ... | ... | ... | In all the Provinces of the Island.   |
| Iron ...      | ... | ... | ... | " " " "                               |
| Chromium ...  | ... | ... | ... | In Nelson and Otago.                  |
| Cobalt ...    | ... | ... | ... | In Otago.                             |
| Copper ...    | ... | ... | ... | In Nelson, Canterbury, and Otago.     |
| Lead ...      | ... | ... | ... | In Nelson and Otago.                  |
| Tungsten ...  | ... | ... | ... | In Otago.                             |
| Titanium ...  | ... | ... | ... | In all the Provinces of the Island.   |
| Antimony ...  | ... | ... | ... | In Otago.                             |
| Arsenic ...   | ... | ... | ... | In Otago.                             |
| Silver ...    | ... | ... | ... | In Nelson and Otago.                  |
| Gold ...      | ... | ... | ... | In all the Provinces of the Island.   |
| Mercury ...   | ... | ... | ... | In Otago.                             |
| Platinum ...  | ... | ... | ... | In Nelson, Canterbury, and Southland. |
| Tridium ...   | ... | ... | ... | In Nelson.                            |
| Osnium ...    | ... | ... | ... | In Nelson.                            |

In the North Island, although the granites and schists are absent, we see a considerable quantity of slaty rocks, extending irregularly from the North Cape to Wellington, which have yielded manganese, cobalt, copper, lead, arsenic, silver, and gold; these rocks cover probably one-fifth of the surface of the Island. But of far greater importance is the large extent of volcanic rocks, forming a mining district belonging to the second class, of probably one-third of the whole Island, from Taranaki and Ruapehu to the extreme North. In this district the following metals have been discovered, principally at the Thames Gold Fields, iron, zinc, copper, lead, titanium, antimony, arsenic, silver, gold, and mercury; while an analysis of a lava from near Lake Taupo, made by Dr. Fehling, showed that it contained traces of tin.

We thus find that probably three-fifths of the whole of the Colony is occupied by rocks in which metals may be expected to occur, and that already in those districts eighteen different metals have been found, not in one locality only, but scattered from the North Cape to Stewart's Island; and we cannot fail to be impressed with the conviction, that at present we know hardly anything of the wealth beneath our feet. The conclusion appears to be almost irresistible, that vast but hidden mineral treasures exist in the Colony, and that could they be all discovered New Zealand would take the rank of one of the first mining districts in the world; and the question now arises, what are the best means for developing that hidden wealth?

In the first place, it must be remarked that, owing chiefly to the meteorological conditions under which New Zealand has been and is now placed, the finding of metalliferous lodes labours under great difficulties. The huge accumulations of moraine matter left by the retreating glaciers have covered up the rocks over large areas in the mountains of the South Island; while the mild and humid climate of both Islands, but more especially that of the North, has clothed the hill sides with a deep layer of decomposed soil, which rarely allows the true rock to be seen, except in the beds of the creeks, and supports a dense vegetation, which is difficult to penetrate, occasioning progress to be slow, while the fatigue is great, and at the same time it offers but little food for the support of adventurous explorers. In the North Island, again, some of the districts in which it is probable that gold and other metals exist, such as the country north-west of Lake Taupo, at the heads of the Mokau and Waipa Rivers, is in the hands of rebel Maoris, who will not allow it to be prospected. Doubtless, it is chiefly owing to these drawbacks that so few metallic veins have as yet been found, but partly also to want of knowledge of what to look for, and want of the stimulus of a certain reward on the discovery of the lode.

No body of men are so well adapted for opening up these hidden treasures as gold-diggers. Not only are they bold explorers and good bushmen, but they are also very intelligent and observing; and their long experience of prospecting, although generally in rather a different way from that to which I now refer, has given them that practised eye which is so necessary for recognizing the first small traces of a metal, and that acumen in following it up which is essential for the discovery of the reef from which it generally came. And now is the time, while diggers are still numerous in the Colony, to undertake a thorough exploration of its mineral resources.

It must not be thought from this that I recommend that the Government should spend large sums in fitting out exploring parties. Such, in my opinion, would not be the best means of opening up the