them, as I could not find the least traces, notwithstanding the most careful search; but the shales, ironstones, and sandstones, principally those in the uppermost portions of the whole series, are sometimes full of the exuviæ of plants, consisting mostly of dicotyledonous leaves of ferns and coniferæ. Of the latter, the principal specimens consisting of leaves and twigs belong to a pine, without doubt closely allied to Dammara, and which has also been found in the septaria of the Waipara, thus indicating that both formations, in other respects so dissimilar, belong to the same geological horizon.

This formation is overlaid unconformably by a series of conglomerates and ferruginous (limonitic) sandstones, which in this part of the country do (as far as I could ascertain) not contain any workable coal seams; whilst more to the north, in the Otepopo district, and lying directly upon the micaceous schists, a seam of brown coal of fair quality occurs, about 5 feet thick, and which is at present worked. Owing to the fact that this coal mine lies about 800 feet above the level of the sea, only accessible by a steep road, and the beds of limited extent only, these deposits are not of practical value at present, except for local purposes.

I may also here observe that in several localities the lowest beds of this younger or limonitic sandstone formation, upon which the Moeraki Septaria bed reposes, the former consisting of a quartz conglomerate, with a very ferruginous matrix, is so auriferous near the contact with the underlying beds, that in some places adits have been driven into the hill side for the extraction of the rock; the stuff thus gained, being broken up with hammers and washed, giving fair wages to the miner.

Practical Suggestions.

The great drawback to the development of the Shag Point Mine, to take the coal seawards, is the existence of a rock midway in the entrance of the small cove adjoining the mine, generally called the Boat Harbour. If it were found to be practicable to have this rock removed, coasting vessels of fair size could come close alongside the mine, and be loaded from the coal trucks. Hitherto vessels loading here have to stand outside, and a boat, carrying several tons of coal in bags has to go backwards and forwards in order to load them, by which process, besides the loss of time, the price of the coal is materially raised.

Moreover, the present possessor of the mine—Mr. J. C. Rowley—has the intention, if the rock in question were removed, to run a steamer of about 50 tons burthen to and from Dunedin, and sell the coal for about 15s. per ton in that city, by which a great boon would be conferred on the inhabitants of that portion of New Zealand, and at the same time make the establishment of many industries possible which hitherto, owing to the high price of coal, could not be begun. Such a steamer, trading regularly between Shag Point, Boat Harbour, and Dunedin, would also transport passengers and goods in both directions, and thus foster commerce and agriculture.

If, therefore, the locality were examined by a Marine Engineer, in order to see if the rock could easily be removed without destroying the value of that small harbour, a great boon would be conferred upon the district.

However, there is still another way of bringing the Shag Point coal into more universal use, by constructing a tramway or light railway to the Moeraki Harbour, and shipping the coal from thence; and by connecting that rail or tramway with another line running through the saddle between Mount Ivitai and Mount Vulcan as far as Palmerston, the fertile and rising district surrounding that township would be brought into easy and regular communication with Moeraki, a harbour which presents so many facilities for shipping.

JULIUS HAAST.

Christchurch, 12th June, 1872.