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1894. James Hector: Progress Report, in Rep. Geol. Surv. during 1892–93, No. 22, pp. xxx–xxxiii.
1913. C. A. Cotton: "The Tuamarina Valley." Trans. N.Z. Inst., vol. 45, pp. 316–322.

2. SUPPOSED INDICATIONS OF COAL AT PAHAUTANUI, ETC.

(By P. G. MORGAN, Director.)

On the 29th August, 1914, I went to Pahautanui, at the eastern end of Porirua Harbour, in order to inspect supposed indications of coal, information concerning which had been supplied by Mr. T. W. Stace, of Wellington. Mr. Stace accompanied me, and introduced me to various settlers who were interested in the possibility of coal being discovered in the Porirua district.

The chief indication of coal was found to be indistinct plant-remains in the Trias-Jura greywackes (sandstones) and argillites that outcrop on the foreshore between Mr. A. de B. Brandon's summer residence and Duck Creek. The greywacke in places contains numerous carbonaceous impressions of unrecognisable plants, whilst some of the smaller associated argillite or shale bands are so crowded with similar remains as to be perfectly black, and even coaly-looking. In no case, however, can any band be spoken of as coal, nor is even the smallest pocket of coal visible in the section examined by me. I can quite believe, nevertheless, that pieces of coal, as I was informed, have been found in the neighbourhood. These probably represent carbonized wood.

Some of those interested in the matter inquired whether coal might not be found at some considerable depth in the district. The answer to such a question is that since the rocks with plant-remains have an almost vertical dip and show numerous outcrops, any coal-seam present in them must also outcrop, and if of appreciable size could not have escaped detection during the many years that the district has been settled. There is, moreover, no probability of the carbonaceous bands of rock mentioned above being any better in depth than on the surface. In this connection one may also mention the fact that although the Trias-Jura rocks of this country do exhibit small coal-seams in several localities, yet in no case has a layer of workable thickness ever been found in them.

The existence of plant-remains in the rocks of Porirua Harbour was noted many years ago by J. C. Crawford,* who also observed similar material at Oriental Bay, Wellington.

On land near Duck Creek belonging to the Misses Jacob some carbonaceous material was found a number of years ago while post-holes for a fence were being dug. The same substance was also obtained in a test pit excavated near the fence. Judging from the small pieces lying on the surface, I would say that the carbonaceous material represents a very impure peat of Recent age, now buried beneath the surface of the little flat extending to the southward. It indicates nothing more than an old swamp, which cannot have been of any greater area than the little flat just mentioned.

I also examined some oily-looking films observed in swampy places not far from the homesteads of Messrs. Brady Brothers, Duck Creek. Most of these were due to oxide of iron, and nothing else; but in one or two cases a little oily material, probably derived from the peaty soil of the swamps, may have been present also. There is thus a possible resemblance to the unimportant oil-occurrence at Paraparaumu, described in last year's annual report.

A little to the south of Messrs. Bradys' houses a thick band of soft ferruginous rock outcrops. This, although far from being rich enough in iron to be considered an ore, may possibly be suitable as a base for red or purple paints.

A sample of a dark-coloured incrustation which is constantly forming on the rock-outcrops in Duck Creek was obtained and submitted to the Dominion Laboratory for analysis, with the following results: Iron oxide (Fe_2O_3), 19·68 per cent.; manganese dioxide (MnO_2), 5·40 per cent.

The sample was also examined for uranium, but none was found.

3. MARBLE OF SANDY BAY DISTRICT.

(By P. G. MORGAN, Director.)

Difficulties having arisen during the past year in connection with the supply of marble for the new Parliamentary Buildings, I twice visited the Sandy Bay district in company with officers of the Public Works Department in order to ascertain whether suitable stone could be conveniently obtained. The following pages include the substance of the reports written immediately after these visits, together with additional information:—

* On the Geology of the Province of Wellington," Trans. N.Z. Inst., vol. ii, 1870, p. 348.