"One of the most remarkable features of this district is the occurrence of considerable quantities of gold in the decomposed soil on the slopes of the hills. This gold is usually flaky and free from quartz, but sometimes attached to small portions of matrix. It is not at all water-worn. It probably is due to the action of rain, which has slowly washed away the rock and reefs contained in it, as they decomposed, leaving the gold behind, almost on the spot where it originally occurred. . . .

"The gold varies much in quality, both from the slates and from the tufa, and the best samples from the latter are purer than the worst from the former, but on the whole the gold from the slates appears to be the most valuable. . . .

"*Puriri District.*—The Puriri Stream falls into the Thames about eight miles above Shortland. It is navigable at high water for cutters for nearly a mile, the tide rising about 6 ft. Above this, large boulders in the stream form rapids, and prevent boats and canoes from going any higher. The stream flows for its last three miles through an alluvial plain composed of reddish-yellow and green clays, containing many trunks of trees, but with little or no pumice. At about two miles from the Thames the valley of the Puriri is about a mile wide, bounded by low, fern-covered hills composed of trachytic tufa. These hills are about 500 ft. high, and continue at about the same altitude for a mile, when they become covered with bush, and rise abruptly to a height of 2,000 ft. It is in these steeper hills that the gold has been found. They, too, are composed of trachytic tufa, containing large rounded boulders of dolerite and greenstone. Behind, again, the ranges are still higher, and probably composed of blue and pink slates, for boulders of these rocks are seen in the streams." *

In the report, dated April, 1870 (Geological Reports, 1870–71), at page 98, where describing the Tapu Creek district, Sir James Hector remarks :—

"This is the next locality south of Coromandel where gold has been found in quantity. Very little progress has been made in this mining district since the date of Captain Hutton's report in 1869. Mr. Davis, who has recently examined it, is of opinion that it has been to some extent sacrificed to the superior attractions of the Shortland field. The number of diggers had fallen from five hundred to fifty, but those that remained were well satisfied with their returns.

"The structure of the district bears a strong resemblance to that of the Matawai Valley, Tapu Creek flowing over green and blue slates, sandstones, and breccias, which rise on the north side of the river to form an isolated mass of hill, about 1,000 ft. high, in the decomposed surface-rock of which most of the remunerative reefs are situated. No well-defined lodes have been established, the reefs being in the decomposed slates and bands of greenstone porphyry which intersect them with a prevalent north-east strike. In the slope-deposits on this hill rich patches of alluvial gold were obtained when the field was first discovered, some of the nuggets weighing over an ounce.

"On the south side of the creek are hills of trachytic agglomerate, which have been thoroughly tested, but, except in a few claims near the junction of the two formations, they were not remunerative. In the same manner the eastern extension of the gold is cut off by trachytic rocks. In this district, therefore, we have the auriferous reefs confined to the surface of the older slate and greenstone rocks, which have been laid bare by the denudation of the trachytic breccias.

"On this subject Mr. Davis furnishes me with the following notes: 'Tapu Creek district furnishes very conclusive evidence of the existence of two distinct and two widely separated volcanic formations. Section I. shows this clearly. It is from the south head of the bay in which Hastings is situated to the top of the hill above the Tapu Gold-mining Company's claims. The dotted line shows a supposed plane of marine denudation, subsequent to the deposition of the older trachyte breccia which lies against the slates, and prior to that of the recent tufas which rest nearly horizontally on the top of all. It would appear as if the stream originally ran more to the north than at present, and that it has gradually cut away the tufas, leaving the slate until it reached the dyke, which has for a time arrested its progress in a southerly direction, and compelled it to cut a channel in the slate itself; the blank space in the section cannot be filled in, as I do not know what formation exists there; at the same time I see no reason for supposing that the slate is cut off by the dyke. The slate and volcanic formations are quite unconformable, the one running north and south, the other east and west. The more recent tufas are nearly horizontal.'"

Sir James, as will be seen from the above, considers that in the Tapu district there is an older (greenstone) and a younger (trachyte breccia) formation, and that the gold is confined to the first or older of these, and in confirmation of this he quotes from notes made by Mr. Davis, who had recently made a more detailed examination of the district. Mr. Davis's remarks are given immediately above. Sir James Hector then goes on to say of the—

"*Ohinemuri [District]*.—Deferring for the present the discussion of the Shortland district (including the Puriri), which has recently been reported on by Captain Hutton and Mr. Davis, I pass [to] the most southern locality in the Colville Peninsula, which has been prospected for gold. The Ohinemuri River is the largest tributary which the Waihou or Thames receives from the eastward, the two rivers joining about eighteen miles in a straight line south of Shortland, but about thirty miles by the windings of the stream, which is navigable as far as the Junction. The mountain-range, which forms the backbone of the Colville Peninsula, is at this point reduced to a single narrow ridge, broken through by the gorge of the Ohinemuri River. This river drains the eastern watershed of the Peninsula by three principal feeders: one, the Whatakura, rising in the ranges to the north, apparently near the sources of the Kahurangi; a middle branch, which rises close to the sea-coast, taking the drainage of a large extent of open level country extending eastward to the edge of a steep cliff that rises abruptly from the

* Probably rhyolite, of which the higher part of the main range is composed, and of which boulders somewhat answering the description of them as above given are found in the bed of the Puriri Stream. In Omaha Peak the rhyolite forms nearly the whole mass down to 500 ft. above the sea, or even lower.—A. McK.