

time until the end of August, when I returned to the Coromandel work. During my absence Mr. Webb continued the work in the northern section. From the 8th October Mr. J. H. Adams, B.Sc., was attached to my staff as temporary assistant in place of Mr. Webb, who proceeded to Wellington on his way to Parapara to assist you in that area. Mr. D. V. Allen, B.Sc., Director of the Coromandel School of Mines, who was engaged for a period of six weeks during his summer vacation of 1905-6, carried out a geological examination of the Cabbage Bay portion of the Coromandel subdivision. A similar arrangement has been made with Mr. Allen for the present season, in accordance with which he assumed his duties on the 14th December. A detailed examination of the Whangapoua Valley has been assigned to him.

*Work in Hokitika Section of North Westland Division and Wilberforce Area.*

My work in this area, under your direct supervision, was confined to that part of the country which could be examined only during the summer season—namely, that constituting the main alpine divide and the high subsidiary flanking ridges lying at the sources of certain branches of the Hokitika, Arahura, Taipo, and Wilberforce Rivers. The results of this examination need not be referred to here, as they are fully detailed in Bulletin No. 1 of the Geological Survey publications.

*Work in the Hauraki Division.*

The area which is to constitute the Coromandel subdivision of the Hauraki division comprises the Survey Districts of Colville, Moehau, Harataunga, Coromandel, and Otama. The subdivision forms that portion of the Hauraki Peninsula which has as its northern extremity Cape Colville, and is bounded to the south by a line extending due east from a point in the vicinity of Kirita Bay, crossing the main divide, and passing through Whitianga Harbour to the eastern coast-line.

The Survey Districts of Colville, Moehau, and Harataunga together constitute the narrower portion of the Hauraki division, the distance from coast to coast averaging about six miles. To the south of these survey districts the country included in the Coromandel and Otama Survey Districts immediately attains a width of twenty miles, due to the prolongation to the eastward of the Kuaotunu Peninsula, which is cut off by the Mercury Bay Inlet from the southerly extension of the main Hauraki Peninsular mass. This width of about twenty miles is preserved to and beyond the limits of the Coromandel subdivision.

Of this stretch of country the portion already examined includes all that lying to the westward of the main mountain divide from Cape Colville to Kirita Bay, and on the eastern side extends from Cape Colville as far southward as the northern headland of the Whangapoua Harbour.

*Physiographic Notes.*

The chief physiographic feature of the area is the main divide—the Cape Colville Range. This longitudinally bisects the narrower and northern portion of the district described, and from here trends in a general southerly direction in such a position as to determine a wider drainage area to the eastward than to the westward. This axial divide is comparatively rugged and broken; the dominating peak, Te Moehau, forms the northern prolongation, and ranks in height (2,935 ft.) as the second mountain of the whole Hauraki area. On the southerly trend of the range other conspicuous peaks, although of somewhat lesser order of magnitude, are Tokatea Hill (1,532 ft.), Kaipawa or Success Hill (1,935 ft.), the castellated crag, Castle Rock (1,724 ft.), Motutere (1,763 ft.), and the conical peak at the head of the Manaia Valley (2,263 ft.).

The flanks of the main divide are incised by numerous streams, which, owing to the rugged configuration of the country and the restricted watersheds, are of relatively steep gradient and small volume. Numerous spurs, more or less transverse to the main divide, mark off the valleys of the numerous streams, while subsidiary flanking ridges and groups of hills, presenting little definite arrangement are in places not uncommon. Plains of any extent are absent from this portion of the peninsula, and in the area examined during the year the flat country is confined to the lower portions of the valleys of the main streams and to very narrow belts, which here and there fringe the coast-line.

Compared with its small area, this portion of the peninsula is girdled by a great length of coast-line, bays and deep indentations being numerous. On the western and more sheltered side, Coromandel and Cabbage Bay are the principal harbours, while Kennedy's Bay affords the safest anchorage on the somewhat exposed eastern coast-line.

*Nature of the Work carried out.*

An enlargement to a scale of 20 chains to an inch of the ordinary county map issued by the Lands and Survey Department is used as a basis for the plotting of the field-work.

A traverse of the whole length of coast-line over the area examined has been carried out. By this means a much more accurate mapping of the minor topographical features has been possible. Of more importance, however, than this amplification of topographical data is the exact determination of the position and extent of the areas covered by the various rocks involved in the structure of the peninsular mass.

All the streams of any importance have been carefully examined, chained traverses of the lower and middle courses and paced traverses of the headwaters and tributaries being the general rule. Barometric elevations of the principal stream-junctions and of the saddles at the sources of the larger branches have been recorded. As the beds of the watercourses afford fair sections of the rocks through which their valleys have been eroded, and may also be regarded as the natural sluice channels for the passage seaward of the debris from the various rock-masses and from any mineral-deposits contained therein, the greater part of our field-work has been confined to these physical features. As great importance is attached to the economic side of the work, a surface prospecting,