

the unequal density of the earth's crust. Other similar discrepancies in astronomical and geodesic latitudes have been reported before as due to the same cause; and it is possible that a discrepancy of more than 30" between the latitudes of Maketu and Poverty Bay Initial Stations, hitherto attributed to imperfect observation, may be found due to the above cause on the re-observation of these stations by Mr. Adams with the zenith telescope during the ensuing season.

The astronomical latitudes of the following list of stations in the Middle Island show a pretty close agreement with the latitudes of the same stations computed through the triangulation from Mount Cook:—

Station.	Astronomically- observed Latitude.	Latitude calcu- lated through the Triangula- tion from Mount Cook.	Difference between Astro- nomical and Triangulation Latitude.	Triangulation Latitude, how obtained.
	° ' "	° "	° ' "	
Mount Cook Observatory	41 18 00.59	
Goulter's Hill ...	41 32 39.87	41 32 35	0 0 04.87	Wellington and Marlborough triangulation.
Isolated Hill ...	42 41 19.5	42 41 16.3 42 41 16.5	0 0 03.2 0 0 03.0	Ditto. Wellington, Marlborough, and Nelson triangulation.
Koiterangi ...	42 52 55	42 53 06.1 42 53 06.2	0 0 11.1 0 0 11.2	Ditto, eastern route. Ditto, western route.
Buller ...	41 48 29.5	41 48 33.5	0 0 4.0	Ditto, western route.
Mount Pleasant ...	43 35 23	43 35 22.3	0 0 0.7	Wellington, Marlborough, Nelson, and Canterbury triangulation.
Burnham ...	43 36 48.4 by Major Palmer	43 36 43.2	0 0 5.2	Ditto.

RECONNAISSANCE SURVEY.

The knowledge of topography of the bush country inland from the coast-line between Jackson's Bay and Martin's Bay back to the main range having long been felt to be very meagre and unreliable, the country never having been surveyed, Mr. G. Mueller, in connection with the West Coast triangulation now in progress, which he is directing, made an exploration of the district last summer, and furnished a report and sketch map (see Appendix). The country is a series of narrow valleys and bush hills, through which, Mr. Muller reports, it is practicable to have a continuous line of road opening out the interior valleys whenever desired.

This country has long been supposed to be auriferous, from the fact that for many years a few adventurous men have made a living, washing the gold from the sands along the sea-beach and from the beds of the streams; but the difficulties of communication with populous centres, of penetrating the West Coast bushes even for a few miles, and at the same time of keeping up supplies, have hitherto prevented this isolated district from attracting a population to settle in it and test its capabilities. Mr. Mueller's report and map are an important contribution towards that end. The settlements at Jackson's Bay and Martin's Bay, after combating for many years with the difficulties referred to, have at length, according to Mr. A. Barron's report (see Appendix), who visited them last summer, got a residuum of hardy settlers, adapted to the conditions of the country, and who are undoubtedly the nuclei of what, with a little judicious expenditure in opening roads or tracks, may soon become important settlements.

SETTLEMENT SURVEYS ON RURAL AND SUBURBAN LANDS.

An area of 439,400 acres has been marked off on the ground into 4,043 sections, at an average cost of 1s. 9½d. per acre. This average is higher than in any former year, and is mainly attributable to a greater proportion of bush surveys on the whole area surveyed than ever before. An additional expense is also incurred by a careful selection of roads and running of grade wherever the ground is uneven or hilly; and it is now the rule to put in the back pegs of all sections,