

the central area was usually occupied by the coarsely-crystalline true granites they appeared to merge into finer-grained more felsitic, microgranites or syenites towards the borders on either side. The green-stone trap intrusions were evidently chiefly confined also to the eastern slope of the range—no rock of this character having been observed at all west of the Gaff Topsail. No distinct evidence of stratification could be detected in this great granitoid region, unless certain alternations of reddish and grayish syenite near the borders of the mass could be considered as such. Again, the alternations of the different varieties of granite may point to a sedimentary origin. Hitherto this belt of archæan rocks which forms the Long Range Mountains, extending through the entire length of the island from Cape Ray to the northern extremity, and which is here crossed by the western branch of the railway, has been regarded as the equivalent of the Lower Laurentian system. No evidence which would warrant a contrary opinion has been obtained during the past season's investigation.

GLACIATION.

A few notes on the glaciation of the country traversed will afford some idea of the enormous erosion which has taken place in this island during a period of its history when the entire surface must have been covered by a moving mass of ice, the action of which mighty force has tended in no small degree to mould it into its present contour. I shall not here attempt any elaborate theorizing upon this interesting phenomena, but shall merely confine myself to a statement of actual facts observed during the season and the deductions to be gathered therefrom. That the entire face of the country has been subjected to profound and long-continued ice-action which has resulted in wholesale denudation of the fundamental rock material forming its solid crust, is everywhere most apparent. The immense profusion of boulders of all shapes and sizes, the rounded outline of the hill-ranges, the deeply grooved striated and frequently polished surfaces of the rock exposures, all bear most unmistakable testimony to the passage of a detritus-laden ice mass apparently of gigantic dimensions and weight.

The direction of the grooves and striæ though occasionally effected by local circumstances is, on the whole, pretty uniform, and points clearly to a main movement from the westward toward the