

PRELIMINARY REPORT
ON THE
SURFACE GEOLOGY OF NEW BRUNSWICK.

The explorations of the past season (1884) relating to the surface Area explored. geology of New Brunswick extended to all parts of the province, and a number of important facts were discovered. The area included in the eastern and northern counties was examined more in detail than other portions, partly because its surface deposits had not hitherto been studied, except in a preliminary way, and partly owing to the fact that data of considerable scientific value were found there in the course of the season's investigations, which, it was considered, might aid in solving the perplexing problem of the glaciation of Eastern Canada.

The observations of geologists on the glaciation of New Brunswick, Observations previous to 1884. having been largely confined to the southern and western counties where the stræ met with have a general southerly or southeasterly bearing, it was therefore inferred that this direction indicated the general ice-movement over the whole province. The investigations of the season of 1884*, however, show that north and east of the water-shed dividing the waters of the St. John River from those flowing into the Baie des Chaleurs and Gulf of St. Lawrence, there was an easterly and northerly ice-movement, during the Ice Age, accompanied by a heavy transportation of drift from the interior towards the coast; that is to say, the water-shed referred to seems also to have shed Glaciation of New Brunswick. the ice of the glacial epoch northward and southward, the glacier or glaciers on the southern side moving in the direction of the Bay of Fundy, while those on the northeastern side moved down the opposite slope into the depression now occupied by the Gulf of St. Lawrence. In addition to these ice-movements, however, stræ have been found on the last mentioned slope, indicating a separate and independent ice-flow, either directly northward or southward, which are referred to a later or second period of glaciation. All the facts relating to these will be found tabulated and details given in a subsequent part of this report.

* The writer first treated of the glacial phenomena of the northern part of the province in a paper published in the *Canadian Naturalist* in 1881, Vol. X., No. 1.