

be capped with perpetual snow, and through a great part of the year surrounded with heavy field and barrier ice, and that in those hills there might be glaciers of greater or less extent. Further, it should be understood that I regard the boulder clays of the St. Lawrence valley as of different ages, ranging from those of the early Pleistocene to that now forming in the Gulf of St. Lawrence; and that during these periods great changes of level occurred. Further, that this boulder clay shows in every place where I have been able to examine it, evidence of subaqueous accumulation, in the presence of marine shells or in the unweathered state of the rocks and minerals enclosed in it; conditions which, in my view, preclude any reference of it to glacier action, except possibly in some cases to that of glaciers stretching from the land over the margin of the sea, and forming under water a deposit equivalent in character to the *boue glaciare* of the bottom of the Swiss glaciers. But such a deposit must have been local, and would not be easily distinguishable from the marine boulder clay. It is of some interest to compare Canadian deposits with those of Scotland,¹ which in character and relations so closely resemble those of Canada; but I confess several of the facts lead me to infer that much of what has been regarded as of subaërial origin in that country must really be marine, though whether deposited by icebergs or by the fronts of glaciers terminating in the sea, I do not pretend to determine.² It must, however, be observed that the antecedent probability of a glaciated condition is much greater in the case of Scotland than in that of Canada, from the high northern latitude of the former, its hilly and maritime character, and the fact that its present

¹ *Journal of Geological Society*. Papers by Jamieson, Bryce, Crosskey, and Geikie.

² Geikie, *Trans. Royal Society of Edin.* Geikie assigns a more complicated structure than appears to be present in Canada; but there are Canadian equivalents of the principal glacial periods which he assumes.