

ice acted together, and along with aqueous agencies, in producing the complicated formations of this remarkable age. They have, however, objected strenuously to the sole employment of one agent to the exclusion of others, and to attributing to that agent powers and extension which obviously could not belong to it, under the known laws which regulate the movement of glaciers by the force of gravity, and the precipitation of moisture in the form of snow on mountains and plateaus. These laws show that the movement of glaciers over level surfaces, or against the slope of the ground, and their moving stones otherwise than down slopes, are physical impossibilities, and that the accumulation of snow to form glaciers can take place only on elevated and cold land, supplied with large quantities of vapour from neighbouring water. Such accumulation can under no imaginable conditions take place in the interior plains and table lands of great continents.

Applying these laws and conclusions to the whole northern hemisphere, we learn that the conditions to produce a glacial period are the diversion of the warm currents from the northern seas, the submergence of land in the temperate regions, and its invasion by cold Arctic water, and great condensation of snow on the higher lands. Whether this condensation has a tendency finally to rectify the state of affairs, by pressing down the mountains and elevating the plains, we do not know, but I should imagine that it has not; for the high lands will, in the case supposed, be lightened by denudation, while the plains will be burdened with a great weight of deposit. Perhaps we should rather look to this as the agency for depressing and submerging the plains and elevating the hills, and suppose some other and more general pressure proceeding from the great sea basins, to effect the re-elevation of the plains.

These questions suggest that of the date of the Glacial period. This subject has recently been discussed by Prestwich and others, with the result that there is no purely geological ground