

says Professor Ramsay, had to descend a slope of about 3° for the first twenty-five miles, and then to *ascend* for the last twelve miles (from the deepest part towards the outlet), at an angle of 5° . It is for those who are conversant with the dynamics of glacier motion to divine whether, in such a case, the discharge of ice would not be entirely effected by the superior and faster moving strata, and whether the lowest would not be motionless or nearly so, and would therefore exert very little, if any, friction on the bottom.

4thly. But the gravest objection to the hypothesis of glacial erosion on so stupendous a scale is afforded by the entire absence of lakes of the first magnitude in several areas where they ought to exist if the enormous glaciers which once occupied those spaces had possessed the deep excavating power ascribed to them. Thus in the area laid down on the map, p. 306, or that covered by the ancient moraine of the Dora Baltea, we see the monuments of a colossal glacier derived from Mont Blanc and Monte Rosa, which descended from points nearly a hundred miles distant, and then emerging from the narrow gorge above Ivrea, deployed upon the plains of the Po, advancing over a floor of marine pliocene strata of no greater solidity than the miocene sandstone and conglomerate in which the lake-basins of Geneva, Zurich, and some others are situated. Why did this glacier fail to scoop out a deep and wide basin rivalling in size the lakes of Maggiore or Como, instead of merely giving rise to a few ponds above Ivrea, which may have been due to ice action? There is one lake, it is true—that of Candia, near the southern extremity of the moraine, which is larger; but even this, as will be seen by the map, p. 306, is quite of subordinate importance, and whether it is situated in a rock basin or is simply caused by a dam of moraine matter, has not yet been fully made out.

There ought also to have been another great lake,