

North America.⁴²—The general succession of geological change in Post-Tertiary time appears to have been broadly the same all over the northern hemisphere. In North America, as in Europe, there is a glaciated and non-glaciated area; but the line of demarcation between them has been much more clearly traced on the western side of the Atlantic. The glaciated area extending over Canada and the northeastern States presents the same characteristic features as in the Old World. The rocks, where they could receive and retain the ice-markings, are well smoothed and striated. The direction of the striæ is generally southward, varying to southeast and southwest according to the form of the ground. The great thickness of the ice-sheet is strikingly shown by the height to which some of the higher elevations are polished and striated. Thus the Catskill Mountains, rising from the broad plain of the Hudson, have been ground smooth and striated up to near their summits, or about 3000 feet, so that the ice must have been of even greater thickness than that. The White Mountains are ice-worn even at a height of 5500 feet. G. M. Dawson has found glaciated surfaces in British Columbia 7000 feet above the sea.⁴³

As in Europe, the glacial deposits increase in thickness and variety from south to north, spreading across Canada, over a considerable area of the northeastern States, and rising to a height of 5800 feet among the White Mountains. From the evidence of the rock-striæ and the dispersion of bowlders, it appears that, though the glaciated region was buried under one deep continuous *mer de glace* like that of Greenland at the present time, moving steadily down from the north, there were considerable variations in the direction of motion, mainly, no doubt, owing to inequalities in the general slope of the ground underneath. Nothing, however, is more striking than the apparent indifference with which the ice streamed onward, undeflected even by considerable

⁴² See J. D. Whitney, "Climatic Changes of later Geological Times," Mem. Mus. Compar. Zool. Harvard, vol. vii. 1882; and papers by J. D. Dana, T. C. Chamberlin, R. D. Salisbury, W. Upham, George M. Dawson, H. Carvill Lewis, G. F. Wright, and others in Amer. Journ. Sci., American Geologist, Canadian Naturalist, Canadian Journal, Ann. Reports of U. S. Geol. Survey, and Canadian Geol. Survey, Second Geol. Surv. of Pennsylvania. J. W. Dawson, "Acadian Geology," 1878; "Handbook of Canadian Geology," 1889; G. M. Dawson, Trans. Roy. Soc. Canada, viii. sect. iv. 1890, p. 25; G. F. Wright, "Man and the Glacial Period," "The Ice Age in America."

⁴³ Geol. Mag. 1889, p. 351; see also W. Upham, Appalachia, v. 1889, p. 291.