

searches of Agassiz, Dessors, and Forbes have brought us acquainted with the fact that the temperature of the glaciers seldom rises above zero, or sinks below it. The savants of the *Hôtel de Neuchâtelois* obtained this result by introducing *thermometrographs* into the sounding-holes which they had pierced in the ice.

The permanency of this temperature is partly attributable to the thick mantle of snow which covers the surface of the glaciers during the greater part of the year, and protects it from the atmospheric heat.

Another interesting phenomenon, and one which has caused considerable discussion, is the *stratification of the glaciers*. It has been a recognized fact, since the days of Saussure, that the superior *névés* are arranged in horizontal strata of about 7 to 10 feet in thickness; the existence of these strata is known through the *zones d'affleurement*—the sectional elevation—at the limit of the glaciers, and at those points where the interior of the mass is laid bare in the crevasses or fissures. Each strata corresponds to one heavy fall of snow, and several are generally formed in the course of a single winter. The fresh-fallen snow is soon glazed over with a thin layer of frost, on which the air deposits a quantity of vegetable or mineral dust. Hence the dull gray colour which, in the *névés*, indicates the separation of the strata.

But this stratified structure is not confined to the *névés*; it is conspicuous in every aspect of the glacier, and accompanies it in its evolutions; only the strata rise in proportion as the glacier descends, and towards the centre they become almost vertical, afterwards to incline anew, and resume the horizontal towards the terminal escarpment or *talus*. This change in the inclination of the strata lies like a bugbear in the path of the partisans of Agassiz, who assert that the primitive stratification of the *névés* is preserved when they pass into the condition of compact ice.

Agassiz attributes these differences of inclination to an actual *straightening* of the icy strata which descend the mountain-side. According to him, the strata are raised, towards the central region of the glaciers, by means of an accelerated movement of the lower beds, and are again inclined by the retardation arising from their friction against the ground. These hypotheses require proof; it seems particularly difficult to admit the acceleration of the lower strata, which M. Agassiz puts forward in explanation of the vertical direction of the strata in the heart of the glaciers. It appears to us more natural to suppose, with Forbes and Schlagintweit, that the mass of the *névés*, at the moment it is transformed into ice and commences its "*facilis descensus*," splits across, and easily gapes open, in such a manner as to present transversal crevasses, which promptly infiltrate the snow-water, and produce the vertical strata of blue ice alternating with the strata of white and aerated ice. As the glacier descends, these strata, by virtue of the unequal swiftness of their different parts, ridge up and swell in a downward direction, and the *zones d'affleurement*, or *stripes* then visible on the surface, assume an ogival form, whose convexity is turned towards the foot of the glacier. These ogives are composed of convexities