whether at the sides or in the middle of a glacier, are termed *moraines*, and at length all this material that has not fallen into crevasses floats on, and is finally slowly shot into the valley at the end of the ice-stream, frequently forming large mounds, known as *terminal moraines*.

All glacier ice, even in the depth of winter in Arctic regions, is said to be at a temperature of about 32° Fahr. that is to say, just about the melting point, excepting near the surface, as far as the cold atmospheric temperature can penetrate. This, it is said, is rarely more than eight or ten feet. Therefore, it is a common statement that, beneath every glacier, water is constantly flowing, caused by the melting of the ice below all the year round, and also by the summer heat on the surface of the glacier, and in some cases, to a less degree, by springs that rise in the rocks below the ice.[1] In parts of some glaciers where crevasses are not numerous, we frequently find large temporary brooks, which generally disappear with the frost at night; but in all the glaciers that I have seen, long before we reach their lower end, all the surface water has found its way to the bottom of the ice.

The water that runs from the end of a glacier very often emerges from an ice-cavern as a ready-made muddy river, charged with the *flour of rocks*, produced in great part by the grinding power of the glacier moving over its rocky floor, and this river carries away the moraine

[1] I am, however, informed by Mr. James Eccles that in the mid-winter of 1875 when he was in the Valley of Chamouni no water flowed from the end of the well-known Glacier de Bossons, and that at the lower end of the large glacier of the Mer de Glace (Glacier des Bois) the stream which is large in summer had decreased to a tiny rivulet. The subject requires more systematic investigation both in the Alps and Greenland.