

production of much fine floury sediment. Ice-filled valleys are thus deepened and widened, and much sediment is formed, and brought within reach of the transporting power of rivers. Great blocks of stone and finer débris that fall from the hills on the surfaces of glaciers, are carried steadily onward in long lines till they reach the ends of these ice-rivers, where they form terminal moraines, and often, as fast as the mounds accumulate, these are proportionally wasted by the streams that flow from the ends of the glaciers.

In cold climates, where special glaciers descend to the sea, bergs break off often laden with blocks and finer sediments, and floating seaward they deposit their freights where they chance to melt. The breaking up of the ice-foot on sea-coasts, and of river ice, also transports large quantities of matter and scatters it abroad.

The quantity of material *degraded* and spread in the sea by these united means is immense, and consists of mud, sand, gravel, and rounded, subangular, and angular blocks, often polished, grooved, and scratched; and from the irregular mode of its accumulation, and the frequent grounding and scraping of icebergs along the sea-bottom, the whole of this matter, if exposed, would present one of the rudest forms of stratification.

But the chief agent in the transportation of sediments from higher to lower levels is running water. Great thunderstorms, water-spouts, and sudden thaws in snow-covered lands, frequently produce startling effects, stripping large areas bare of soil, and hurrying to lower levels vast masses of earth, shingle, and boulders.

Every one who has looked at large rivers knows that they are rarely pure and clear. The cause of this is obvious. All rain, especially if long continued, exercises