all sizes up to blocks a foot in diameter. These fragments were all evidently water-worn, as if derived from land, though we are still ignorant of the extent to which they may have been supplied by submarine volcanic eruptions. Some small pieces were taken on the surface of the ocean in the tow-net. Round volcanic islands, and off the coasts of volcanic tracts of the mainland, the sea is sometimes covered with floating pieces of water-worn pumice swept out by flooded rivers. These fragments may drift away for hundreds or even thousands of miles until, becoming waterlogged, they sink to the bottom. The universal distribution of pumice was one of the most noticeable features in the dredgings of the "Challenger." The clay which is found on the bottom of the ocean, at the greatest distances from any shore, contains only volcanic minerals, and appears to be due to the trituration of volcanic detritus. In approaching the continents, at a distance of several hundred miles from shore, traces of the minerals of the crystalline rocks of the land begin to make their appearance.[290]

Another not unimportant process of marine transport is that performed by floating ice. Among the Arctic glaciers, moraine stuff is not abundant; but occasional blocks of rock and heaps of earth and stones fall from the cliffs which rise above the general waste of snow. Hence, on the icebergs that float off from these glaciers, rock débris may sometimes be observed. It is transported southward for hundreds of miles until, by the shifting or melting of the bergs, it is dropped into deep water. The floor of certain portions of the North Atlantic in the pathway of the bergs may be plentifully strewn with this kind of detritus. By means

[290] Murray, Proc. Roy. Soc. Edin. 1876–77, p. 247.