

and become icebergs. Scoresby counted 500 of these bergs drifting along in latitudes 69° and 70° N., which rose above the surface from the height of 100 to 200 feet, and measured from a few yards to a mile in circumference.* Many of them were loaded with beds of earth and rock of such thickness, that the weight was conjectured to be from 50,000 to 100,000 tons. Specimens of the rocks were obtained, and among them were granite, gneiss, mica-schist, clay-slate, granular felspar, and greenstone. Such bergs must be of great magnitude; because the mass of ice below the level of the water is about eight times greater than that above. Wherever they are dissolved, it is evident that the "moraine" will fall to the bottom of the sea. In this manner may submarine valleys, mountains, and platforms become strewed over with gravel, sand, mud, and scattered blocks of foreign rock, of a nature perfectly dissimilar from all in the vicinity, and which may have been transported across unfathomable abysses. If the bergs happen to melt in still water, so that the earthy and stony materials may fall tranquilly to the bottom, the deposit will probably be unstratified, like the terminal moraine of a glacier; but whenever the materials are under the influence of a current of water as they fall, they will be sorted and arranged according to their relative weight and size, and therefore more or less perfectly stratified.

In a former chapter it was stated, that some ice islands have been known to drift from Baffin's Bay to the Azores, and from the South Pole to the immediate neighbourhood of the Cape of Good Hope, so that the area over which the effects of moving ice may be experienced, comprehends a large portion of the globe.

We learn from Von Buch that the most southern point on the continent of Europe at which a glacier comes down to the sea is in Norway, in lat. 67° N.† But Mr. Darwin has shown, that they extend to the sea, in South America, in latitudes more than 20° nearer the equator than in Europe; as, for example in Chili, where, in the Gulf of Penas, lat. $46^{\circ} 40'$ S., or the latitude of central France; and in Sir George Eyre's Sound, in the latitude of Paris, they give origin to icebergs, which were seen in 1834 carrying angular pieces of granite, and stranding them in fiords, where the shores were composed of clay-slate.‡ In the island of Georgia, in lat 54° S., where the perpetual snow descends to the sea-coast, glaciers have been observed to generate icebergs covered with mud and stones.

In a late voyage of discovery made in the antarctic regions in 1839, a dark-coloured angular mass of rock was seen imbedded in an iceberg, drifting along in mid ocean in lat. 61° S. That part of the rock which was visible was about 12 feet in height, and from 5 to 6 in width, but the dark colour of the surrounding ice indicated that much more of the stone was concealed. A sketch made by Mr. Macnab, when the vessel was within a quarter of mile of it, is now

* Voyage in 1822, p. 233.

† Travels in Norway.

‡ Darwin's Journal, p. 283.