limits would seem to range between the 67th and 69th parallels, a part of which we trust, ere long, to see laid down in our charts, and not improbably rendered subservient to the interests of science, if not to the prosperity of our fisheries. Still less can we refrain from adverting to the expedition of the *Erebus* and *Terror*, commanded by Captain James Ross, which has recently left our shores, liberally fitted out by her majesty's government in the most complete manner, for scientific purposes, of any ships that ever sailed from Europe; and it is gratifying to know that the voyage of the *Eliza Scott* cannot but prove useful towards the success of the greater expedition, inasmuch as the Balleny Isles are situated exactly on the eastern verge of the circle traced by Captain James Ross on his chart, as the limit within which he hoped to find the southern magnetic pole; and thus their discovery will almost insure him a spot for planting his instruments at one of the places most desirable for making observations on magnetic dip, variation, and intensity.

And, although this latter expedition is mainly fitted out with the object of deciding the great problem of terrestrial magnetism in the southern hemisphere, and that its attention will be chiefly directed to this branch of physical geography, we cannot but hope that it may also do much in the cause of Antarctic discovery, and conclude with the earnest wish that the well-known zeal and ability of the gallant commander may be crowned with success, and that he may safely return to his country and his friends to receive the well-merited reward of his toils, in the applause and esteem of all civilized nations.

VII.—*Note on a Rock seen on an Iceberg in* 61° *South Latitude.* By CHARLES DARWIN, Esq.

HAVING been informed by Mr. Enderby, that a block of rock, embedded in ice, had been seen during the voyage of the schooner *Eliza Scott* in the Antarctic Seas, I procured through his means an interview with Mr. Macnab, one of the mates of the vessel, and I learnt from him the following facts:—On the 13th March, when in lat. 61° S., and long. 103° 40′ E., a black spot was seen on a distant iceberg, which, when the vessel had run within a quarter of a mile of it, was clearly perceived to be an irregularly-shaped but angular fragment of dark-coloured rock. It was embedded in a perpendicular face of ice, at least 20 feet above the level of the sea. That part which was visible, Mr. Macnab estimated at about 12 feet in height, and from 5 to 6 in width; the remainder (and from the dark colour of the surrounding ice, probably the greater part) of the stone was concealed. He made a rough sketch of it at the time, as represented at p. 524. The iceberg which carried this fragment was between 250 and 300 feet high.

Mr. Macnab informs me, that on one other occasion (about a

week afterwards) he saw on the summit of a low, flat iceberg, a black mass, which he thinks, but will not positively assert, was a fragment of rock. He has repeatedly seen, at considerable heights on the bergs, both reddish-brown and blackish-brown ice. Mr. Macnab attributes this discolouration to the continued washing of the sea; and it seems probable that decayed ice, owing to its porous texture, would filter every impurity from the waves which broke over it.

Every fact on the transportation of fragments of rock by ice is of importance, as throwing light on the problem of 'erratic boulders,' which has so long perplexed geologists; and the case first described possesses in some respects peculiar interest. The part of the ocean, where the iceberg was seen, is 450 miles distant from *Sabrina* land (if such land exists), and 1400 miles from any certainly known land. The tract of sea, however, due S., has not been explored; but assuming that land, if it existed there, would have been seen at some leagues distance from a vessel, and considering the southerly course which the schooner *Eliza Scott* pursued immediately prior to meeting with the iceberg, and that of Cook in the year 1773, it is exceedingly improbable that any land will hereafter be discovered within 100 miles of this spot. The fragment of rock must, therefore, have travelled at least thus far from its parent source; and, from being deeply embedded, it probably sailed many miles farther on before it was dropped from the iceberg in the depths of the sea, or was stranded on some distant shore. In my Journal, during the voyage of H.M.S. *Beagle*, I have stated (p. 282), on the authority of Captain Biscoe, that, during his several cruises in the Antarctic Seas, he never once saw a piece of rock in the ice. An iceberg, however, with a considerable block lying on it, was met with to the E. of South Shetland, by Mr. Sorrell (the former boatswain of the *Beagle*), when in a sealing vessel. The case, therefore, here recorded is the second; but it is in many respects much the most remarkable one. Almost every voyager in the Southern Ocean has described the extraordinary number of icebergs, their vast dimensions, and the low latitudes to which they are drifted: Horsburgh* has reported the case of several, which were seen by a ship in her passage from India, in lat. 35° 55′ S. If then but one iceberg in a thousand, or in ten thousand, transports its fragment, the bottom of the Antarctic Sea, and the shores of its islands,† must already be scattered with masses of foreign rock,—the counterpart of the "erratic boulders" of the northern hemisphere.

* Philosophical Transactions, 1830, p. 117.

† M. Cordier, in his instructions (L'Institut, 1837, p. 283) for the voyage of the *Astrolabe* and *Zélée*, says, that the shores of South Shetland were found, by the naturalist of an American expedition in 1830, covered with great erratic boulders of granite, which were supposed to have been brought there by ice. It is highly desirable that this fact should be inquired into, if any opportunity should hereafter occur.