

If Africa and New Holland extended farther to the south, a diminution of ice would take place in consequence of the radiation of heat from these continents during summer, which would warm the contiguous sea and rarify the air. The heated aerial currents would then ascend and flow more rapidly towards the south pole, and moderate the winter. In confirmation of these views, it is stated that the ice, which extends as far as the 68° and 71° of south latitude, advances more towards the equator whenever it meets an open sea; that is, where the extremities of the present continents are not opposite to it; and this circumstance seems explicable only on the principle above alluded to, of the radiation of heat from the lands so situated.

The cold of the antarctic regions was conjectured by Cook to be due to the existence of a large tract of land between the seventieth degree of south latitude and the pole. The justness of these and other speculations of that great navigator have since been singularly confirmed by the investigation made by Sir James Ross in 1841. He found Victoria Land, extending from 71° to 79° S. latitude, skirted by a great barrier of ice, the height of the land ranging from 4,000 to 14,000 feet, the whole entirely covered with snow, except a narrow ring of black earth surrounding the huge crater of the active volcano of Mount Erebus, rising 12,400 feet above the level of the sea. The position of a mountainous territory of such altitude, so near the pole, and so obvious a source of intense cold, fully explains why Graham's and Enderby's Land, discovered by Captain Biscoe in 1831-2 (between lat. 64° 68° S.), presented a most wintry aspect, covered even in summer with ice and snow, and nearly destitute of animal life. In corresponding latitudes of the northern hemisphere we not only meet with herds of wild herbivorous animals, but with land which man himself inhabits, and where he has even built ports and inland villages.*

The distance to which icebergs float from the polar regions on the opposite sides of the line is, as might have been anticipated, very different. Their extreme limit in the northern hemisphere is lat. 40° , as before mentioned, and they are occasionally seen in lat. 42° N. near the termination of the great bank of Newfoundland, and at the Azores, lat. 42° N., to which they are sometimes drifted from Baffin's Bay. But in the other hemisphere they have been seen, within the last few years, at different points off the Cape of Good Hope, between lat. 36° and 39° .† One of these (see fig. 2.) was two miles in circumference, and 150 feet high, appearing like chalk when the sun was obscured, and having the lustre of refined sugar when the sun was shining on it. Others rose from 250 to 300 feet above the level of the sea, and were therefore of great volume below;

* After all these modern discoveries, the area still unexplored, within the antarctic circle, is more than double the area of Europe. The surface of the latter contains about 2,793,000 square geographical miles. The unexplored antarctic region, as calculated for me by Mr. Gardner, in 1840, equalled about 7,620,000 square miles.

† On Icebergs in low latitudes, by Capt. Horsburgh, by whom the sketch was made. Phil. Trans. 1830.