

was stopped by an icy barrier extending upwards of 300 miles east and west, the perpendicular cliffs of which attained an altitude of from 150 to 200 feet, whilst the depth of water close outside these cliffs ranged between 180 and 410 fathoms. This icy barrier began at the foot of Mounts Erebus and Terror, which appear to be the southern peaks of a range of hills stretching irregularly to the northward at moderate distances from the coast as far as Cape North, in lat. $71^{\circ} 30' S$. Off the coast of this high land there was pack ice; and here and there, descending from the ravines of the mountain ranges, were glaciers which extended some distance into the sea, and ended in perpendicular cliffs of considerable height, but there was no such barrier as extended west from the foot of Mount Terror.

That the edge of the icy barrier seen by Ross is nearly, if not quite, water-borne, and therefore just in a condition to generate icebergs is evident, for the height of the ice cliffs above the water-line varies from 150 to 200 feet (mean 175 feet), whilst the depth of water within a mile of them is 260 fathoms. Now, supposing the specific gravity of ice at 32° to be 0.92, and that of sea water at the same temperature to be 1.027 (distilled water at 39° being equal to 1), an iceberg floating will have 89.6 per cent. of its volume immersed, that is supposing it to be of the same temperature and consistency throughout, or in round numbers 90 per cent. of volume will be under water, and 10 per cent. above. Taking this as the basis of calculation, it is found that the icy cliffs of the barrier will be water-borne at 260 fathoms, or precisely the depth found by Ross close to them. This also will be the draught of water of a tabular iceberg detached from the barrier whose height above water is 175 feet. This uniform height, about 175 feet, of the tabular icebergs in high latitudes cannot fail to strike even the most ordinary observer, and can only be accounted for by supposing them to have been generated by the icy barrier.

The highest berg seen by Cook was in lat. $59^{\circ} S$, long. $92^{\circ} E$, 300 to 400 feet high, but was only half a mile round. Ross does not mention any very high iceberg, and Wilkes estimates his highest at 500 feet, but this was not a tabular berg, and although very high table-topped icebergs have been seen far north, they were always in a rapid state of dissolution. In fact they sometimes break up in high latitudes, for Biscoe observed one fall asunder in lat. $65^{\circ} S$, long. $116^{\circ} W$.

The icebergs met with in the Challenger were usually from a quarter to half a mile in diameter, and about 200 feet high; the highest measured was 248 feet, but it was evidently an old berg floating on a large base. The largest, which was seen farthest south in latitude $66^{\circ} 40'$, was 3 miles in length, and was accompanied by several others nearly as large. It is remarkable how few were fallen in with to the westward of the 80th meridian of east longitude, or to the northward of the pack ice there, which was probably a detached pack, similar to that sailed through by Ross in 1841.

To the eastward of the meridian of $92^{\circ} E$ icebergs were very numerous, and con-