

1864, 'contains more than 500 tons, and is known as Charlie's Stone. Others varying in bulk from 100 to 5 tons or less lie by hundreds, piled up in all positions in high and long ridges, which, before the march of improvement began in the district, extended far into the field above the cliff.¹ Near the old limekiln, South Head, similar large blocks of sandstone have been moved by the gales of the last three years. The great storm of December 1862 in particular distinguished itself by the havoc which it wrought along these shores. It swept the sea over the north end of the island of Stroma, which lies in the Pentland Firth,² and redistributed the ruin-heaps there. The waves ran bodily up and over the vertical cliffs on the west side, 200 feet in height, lodging portions of the wrecked boats, stones, seaweeds, etc., on the top. They rushed in torrents across the island, tearing up the ground and rocks in their course towards the old mill at Nethertown on the opposite side. This mill had often before been worked by water collected from spray thrown over these cliffs, but never had such a supply been furnished as by this gale. One curious phenomenon was noticed at the south end of Stroma; the sea

¹ This mass of ruin was noticed by Hugh Miller, who suggested that it might have been produced by the stranding of icebergs. Mr. Peach, however, remarked that there is every reason to believe it to be the work of the sea, and even now an occasional stone is added to the pile—a block at least half a ton in weight, about the year 1863, was torn up from its position fifty feet above the sea-level.

² The spring tides of the Pentland Firth run at a rate of 10.7 nautical miles in the hour, and are probably by much the most rapid marine currents round the British Islands. Yet that they do not of themselves produce any appreciable abrasion of the coast-line is shown by the coating of barnacles and sea-weed on the rocks even at low water. As currents, their power by mere friction is probably *nil*; but when they are aided by powerful winds they lend a prodigiously accelerated impetus to the ordinary wind-waves. Hence the incredible force of the breakers in these northern seas.