

Orkney side, passed bodily over the cliffs of Stroma. The effects of this terrific gale will long be remembered. Some time after its occurrence I was on Stroma and along the Pentland Firth side, and was deeply struck with the ruin spread around. The huge masses that had been moved exceeded all I had ever seen before. With this evidence, added to a long experience of storms, I am compelled to believe that the ruin of cliffs and the heaping-up of torn rock-masses have been effected by the sea when agitated by storms, and not by icebergs.'

A few years ago on the northern coast of Caithness I observed an interesting proof of the inroads of the sea upon the hard flagstones of that iron-bound shore. A 'brough' or 'Pict's House,' which, of course, had been originally entire, and had, no doubt, been built near the edge of the cliff for safety, was deeply trenched by the advance of a narrow gully in the precipice.

Leaving the dark flagstone cliffs and stacks of Caithness, we cross the wild tides of the Pentland Firth, and find ourselves among the rocky fjords and voes of the Orkney and Shetland Islands. There the power of the sea comes before us even more impressively. The intricate indented coast-line, worn into creeks and caves and overhanging cliffs; the crags, and skerries, and sea-stacks (Fig. 13), once a part of the solid land, but now isolated among the breakers; the huge piles of fragments that lie on the beach, or have been heaped far up above the tide-mark, tell only too plainly how vain is the resistance even of the hardest rocks to the onward march of the ocean. The rate of waste along some parts of these islands is so rapid as to be distinctly appreciable within a human lifetime. Thus, in the chain of the Orkneys, the Start Point of Sanday was in 1816 an island every flood tide; yet even within the memory of