

Though I have no doubt that many seaward extensions of land valleys, now fiords, were once dry land valleys themselves, and that the deeper hollows in them were sometimes excavated when the whole stood above the level of the sea, yet this is not essential, for as has been observed by Mr. Amund Helland in his masterly papers (already quoted) on the Glaciation of Greenland, Norway, and Sweden, if a great glacier be sufficiently powerful to push onward, and grind for many miles along the bottom of a long fiord, the scooping out of rock-bound basins will be much the same as if its whole length were above the level of the sea.

I am not aware of any such fiords on the coast of England, though it may very well be that in Wales the Estuary of the Mawddach may be an old lake or rock-bound fiord-basin now greatly silted up, for the frequent *roches moutonnées* opposite Barmouth, once islands, seems to indicate a rocky barrier there.

When, however, we go into Scotland, where the mountains are high and the valley ice-streams were thick, there is no lack of them there. From Loch Erriboll, with its ice-ground mountains and islets, fig. 94, to the Firth of Clyde there is not a fiord that is not deeper in its further recesses than at its mouth, a fact proved by the charts of the Admiralty.¹ It is needless here to enter into minute details, but I may mention that the small fiord of Loch Erriboll is 78 feet deep near its upper end, and much shallower at its mouth. Half way up, little Loch Broom has a depth of 342 feet, and at its mouth is nowhere deeper than from 60 to

¹ For a recent account of this subject see 'The Great Ice Age, by James Geikie, LL.D., F.R.S., in which, on very clear maps, he shows soundings both of inland fiords, and sea rock-basins near the British coasts.