

But it is also possible that they were originally scarce, for we read of the waters of the sea being so freshened and chilled by the melting of ice-bergs in some Norwegian and Icelandic fiords, that the fish are driven away, and all the mollusca killed. The moraines of glaciers are always from the first devoid of shells, and if transported by ice-bergs to a distance, and deposited where the ice melts, may continue as barren of every indication of life, as they were when they originated.

Nevertheless, it may be said, on the other hand, that herds of seals and walrus crowd the floating ice of Spitzbergen in lat. 80° north, of which Mr. Lamont has recently given us a lively picture,* and huge whales fatten on myriads of pteropods in polar regions. It had been suggested that the bottom of the sea, at the era of extreme submergence in Scotland and Wales, was so deep as to reach the zero of animal life, which, in part of the Mediterranean (the Egean, for example), the late Edward Forbes fixed, after a long series of dredgings, at 300 fathoms. But the shells of the glacial drift of Scotland and Wales, when they do occur, are not always those of deep seas; and, moreover, our faith in the uninhabitable state of the ocean at great depths has been rudely shaken, by the recent discovery of Captain M'Clintock and Dr. Wallich, of starfish in water more than a thousand fathoms deep (7,560 feet!), midway between Greenland and Iceland. That these radiata were really dredged up from the bottom, and that they had been living and feeding there, appeared from the fact that their stomachs were full of globigerina, of which foraminiferous creatures, both living and dead, the oozy bed of the ocean at that vast depth was found to be exclusively composed.†

Whatever may be the cause, the fact is certain, that over large areas in Scotland, Ireland, and Wales, I might add

* Seasons with the Sea-Horses, 1861.

† See Appendix H. On life at great depths in arctic and antarctic seas.