to an abundant plant-life exist in the Northern Atlantic, and the somewhat exacting neritic species benefit accordingly. This explanation, at any rate, seems to me the most reasonable one.

Another well-known instance is in the Polar Seas during the summer. Close to the melting polar ice, where it meets the warmer water-masses, a rich flora of neritic diatoms sometimes develops, while littoral species form a brown layer over the floes and broken lumps floating between them.

Blessing.

Blessing, who took part in Nansen's expedition during 1893-1896, has given a good description of this latter phenomenon. We must look upon the Polar Seas as coastal waters in the biological sense. They have the extreme variations of temperature and salinity, and probably also the abundant supply of nourishment, that we would expect to find in a coastal sea. The resting-spores are enclosed in the ice, as I was able to show after examining the material collected by Nansen.

In the warmer parts of the Atlantic there are neritic diatoms nearly everywhere, but never in any great quantity, except where rivers enter the sea in the tropical regions. As a rule, too, they are smaller and weaker in structure than those we meet with in coastal waters under similar conditions of temperature. The cell-walls are very often only slightly silicated, and the form itself is so indistinct that it is difficult to distinguish species, which in their properly developed condition have unmistakable characters. It is not easy to tell whether this degeneration is merely a sign of insufficient nourishment, or whether other causes are also responsible. Certainly in one case want of nourishment is not entirely to blame. Out in the water-masses of the Atlantic to the south of Iceland we get a community of neritic diatoms that occur especially in the spring and autumn. Most of them are species of *Chætoceras*. The prevailing forms have been long ago determined, and are undoubtedly *C. schüttii* and *C. laciniosum*. Still they are so dwarfed in structure, and so much the reverse of typical, that one might very well say that they were separate species (see Fig. 244). During this last expedition of ours we succeeded in finding this diatom-flora again, though in smaller quantities, in the Gulf Stream off the east coast of North America, so that it is practically certain that the neritic diatoms of the Atlantic south of Iceland are derived from the American coastal sea. As they are borne passively northwards towards