

multitude of species was surprising, though none of them was very numerously represented. Every day one might sit and examine some unique microscopical form, which might be lost only too easily, and consequently had to be drawn there and then. And whereas in the north there are large quantities of every species, so that it is easy to investigate them in all their stages of development and variation, this multiplicity of forms in the tropics renders it incomparably harder to find out what stages of development belong to the same species, or how the boundaries between the different species are to be fixed.

The various stations did not differ much from one another, if we except Station 59, near Fayal in the Azores, where there were numbers of neritic diatoms, and Station 66, close to the Newfoundland Bank, where there was an addition of arctic forms. On the whole, the multiplicity of species increased as we went westwards. Possibly considerable differences may be revealed when the material has been completely treated, but all the species occur too sparsely in these samples to justify one in drawing conclusions from negative results.¹

The Tropical Atlantic flora much resembles the plankton flora of the Indian Ocean observed by Karsten. In the Pacific there would seem, according to Kofoid, to be an even greater multiplicity of species, but I found several of the new species obtained by him during the "Albatross" Expedition, and it is probable that more and more of these rare Pacific species will gradually be found within Atlantic waters also.

In conclusion, it should be stated that, as far as quantity is concerned, the smallest plankton organisms, Lohmann's Nanno-plankton, play a far more important rôle than the whole of the other species caught in our silk nets, which will be subsequently discussed in their proper order.

¹ To show the character of the flora I append a list of species found at Station 64, lat. 34° 44' N., long. 47° 52' W., in a closing-net sample from a depth of 200 metres to the surface:—

Diatoms: *Coscinodiscus rex*, *C. lineatus*, *Euodia cuneiformis*, *Planktoniella sol*, *Gossleriella tropica*, *Thalassiosira subtilis*, *Asterolampra marylandica*, *Rhizosolenia castracanei*, *R. acuminata*, *R. styliiformis*, *Bacteriastrum elongatum*, *Hemiaulus* sp., *Chetoceras dicheta*, *C. tetrastichon*, *C. peruvianum*, *C. coarctatum*, *C. furca*.

Peridineæ: *Ceratium pentagonum*, *C. teres*, *C. candelabrum*, *C. gravidum*, *C. fusus*, *C. extensum*, *C. pennatum*, *C. gibberum*, *C. bucceros*, *C. platycorne*, *C. azoricum*, *C. tenue*, *C. pavillardi*, *C. karsteni*, *C. declinatum*, *C. gracile*, *C. arietinum*, *C. macroceros*, *C. massiliense*, *C. arcuatum*, *C. carriense*, *C. reticulatum*, *C. trichoceros*, *C. palmatum*, *C. limulus*, *C. pulchellum*, species of *Peridinium*, *Diplopsalis lenticula*, *Blepharocysta splendor maris*, *Ceratocorys horrida*, *Goniodoma polyedricum*, *G. fimbriatum*, *Gonyaulax polygramma*, *G. joliffi*, *G. pacifica*, *G. fragilis*, *G. mitra*, *Protoceratium reticulatum*, *Podolampas elegans*, *P. palmipes*, *P. bipes*, *Oxytoxum scolopax*, *O. reticulatum*, *O. cristatum*, *O. milneri*, *O. tessellatum*, *Dinophysis uracantha*, *D. schiittii*, *D. schröderi*, *Phalacroma argus*, *P. doryphorum*, *P. cuneus*, *P. rudgei*, *Amphisolenia palmata*, and another new species, *Ornithocercus quadratus*, *O. magnificus*, *O. steinii*, *O. splendidus*, *Pyrocystis lunula*, *P. noctiluca*, *Hexasterias problematica*.

Cyanophyceæ: *Trichodesmium thiebaulti*.