

called arctic. Here, too, diatoms predominate, and *Chætoceras* takes first place. The commonest forms include :—

(a) Northerly : *Chætoceras teres*, *C. constrictum*, *C. diadema*, *C. debile*, *C. crinitum*, *C. pseudocrinitum*, *C. scolopendra*, *C. sociale*, *C. simile*, *Rhizosolenia setigera*, *Thalassiosira decipiens*, *Coscinosira polychorda*, *Leptocylindrus danicus*.

(b) Southerly : *Chætoceras weissflogii*, *C. contortum*, *C. didymum*, *C. lacinosum*, *C. schüttii*, *C. curvisetum*, *C. cinctum*, *C. anastomosans*, *C. radians*, *Lauderia annulata*, *Cerataulina bergonii*, *Biddulphia mobiliensis* and *B. regia*, *Eucampia zodiacus*, *Ditylum brightwellii*, *Guinardia flaccida*, *Asterionella japonica*, the peridinean *Prorocentrum micans*, and the brown flagellate *Phæocystis globosa*.

Tropical
neritic species.

(3) *Tropical neritic species* have had far less study devoted to them ; still we may denote by this term a whole series of species that have their northernmost limit on the coasts of the Mediterranean. Of these we may mention :—

Chætoceras furca, *C. diversum*, *C. femur*, *Hemiaulus hauckii* and *H. heibergii*, *Detonula schröderi*, *Asterionella notata*, *Rhizosolenia cylindrus*.

Neritic dia-
toms in the
Antarctic.

The neritic flora off the coasts of the Atlantic in the southern hemisphere has also been comparatively little studied as yet. Still we are justified in saying that the neritic diatoms of the antarctic, from the ice barrier northwards, differ in the main from species belonging to the northern hemisphere. The difference indeed is so great, that hardly a single species is common to both arctic and antarctic waters. The investigations of Cleve, Karsten, and Van Heurck show that the following neritic diatoms may be considered characteristic of the antarctic :—*Chætoceras radiculum*, *Møelleria antarctica*, *Eucampia balaustium*, *Fragilaria antarctica*, *Thalassiosira antarctica*, and probably several others whose biology is as yet only slightly known.

Oceanic
species.

Oceanic plankton algæ are much more widely distributed than neritic algæ, and it would almost seem from our material that each species may be met with in all the seas of the world, wherever there are favourable conditions of existence. The diatoms are apt to occur irregularly. Sometimes we find enormous quantities of them, and at other times they may be so scarce that it is difficult to detect them. The peridineæ are more evenly distributed, and this is true especially of the species of *Ceratium*, which are fairly abundant and hardly ever absent from oceanic-samples, unless perhaps in arctic waters. They may well be used as guiding forms to express the character of the plankton. It is possible that the different