

*Antipathes*.—Under this genus Milne-Edwards classes all forms of Antipathidæ which have not been assigned a place in other genera. It is needless to say that it includes a medley of species, united only by one common character,—the absence of fusions between adjoining parts of the corallum. So far as the mode of branching is concerned, we find almost every variety from simply pinnate forms, to the most complex. One need only mention *Antipathes pennacea*, Pallas, *Antipathes subpinnata*, Ellis and Solander, *Antipathes larix*, Esper, *Antipathes abies* (Linnæus), *Antipathes myriophylla*, Pallas, *Antipathes dichotoma*, Pallas, and *Antipathes virgata*, Esper, to show the endless variety. At the present time some forty or fifty species might be named, all of which would agree in the plan of branching with one or other of the species enumerated above. Just as the presence of fusions in a colony appears to be of no generic value, so I conceive the absence of them to be a minor feature, of value perhaps for specific purposes (though even then not always), but of no value generically. Of the species which would come under this genus as defined by Milne-Edwards, I find some with dimorphic zooids and others without; whilst in the latter section alone I find amongst the comparatively few species examined at least four distinct types of zooids. Evidently then it is impossible to adopt Milne-Edwards' modification of this genus, and in attempting to found new ones I have relied chiefly on the form and structure of the zooids in the various species observed.

Gray (42) in 1860 described two additional species from Madeira, viz., *Antipathes* (*Cirrhopathes*) *setacea* and *Antipathes gracilis*. I have been unable to find the type of *Cirrhopathes setacea* in the British Museum collection, but the type of his var. *occidentalis* is preserved there, and as this appears to differ from any form previously described I have here raised it to the rank of a species.

In the same year the first part of Duchassaing and Michelotti's Memoir on the Corals of the Antilles (43) appeared, and in this and the concluding portion published in 1866 four new forms are described, *Cirrhopathes desbonni*, which has since been met with by Pourtalès, and three species of *Antipathes*. Of these *Antipathes americana* is probably a distinct species, whilst *Arachnopathes paniculata* seems closely allied to *Antipathes atlantica*, Gray, and *Antipathes dissecta* is equally closely related to *Antipathes glaberrima*, Esper.

Lacaze Duthiers was the first to study the structure of the polyps of the Antipathidæ, and in 1864 published the first of two important memoirs on the morphology of the group. The earlier memoir (44) treats of the structure and relations of *Leiopathes lamarcki*, Haime. The author was enabled to study living specimens collected by the coral fishermen off the coast of Algeria, and for the first time to make out the structure and affinities of the polyp of this form which had not previously been observed. He shows how in different states of preservation the whole or various parts of the colony have received different names.