

dried, but this is the case with the animals of all the Gorgoniadæ I have examined under similar conditions. The pinnæ appear to be permanently withdrawn under such circumstances."

The first volume of Milne-Edwards' *Histoire Naturelle des Coralliaires* (41), containing an account of the Antipatharia, appeared in the autumn of 1857, so that the author could not have seen Gray's papers on the subject communicated to the Zoological Society in the same year. I am not aware which was published first, but think it probable that this volume may have been issued before the publication of Gray's Synopsis, which occupies the last pages of the 1857 volume. In any case it is unfortunate that two important and independent revisions of the order should have been published in the same year, and that no attempt has since been made to bring their results into harmony. Milne-Edwards, acting on the suggestions of Dana, forms a new suborder of the Zoantharia, *Zoantharia sclerobasica* or Antipatharia, for this group. He is of opinion that the spinose nature of the axis insisted on by Pallas and others as an essential character, though usual, is not universal, and cannot be regarded as of ordinal value.

Milne-Edwards adopts the genera *Cirrhopathes*, Blainville, and *Leiopathes*, Gray, and proposes to further subdivide the original genus of Pallas, by the establishment of three new genera. A glance at the subjoined table will show the arrangement proposed:—

Sclerobasic axis	{	simple—rod-like,	.	.	.	.	.	.	<i>Cirrhopathes</i> , Blainville.	
		{	{	chitinous; surface of large branches	{	rough ;	{	free,	.	.
	coalescent, and disposed in form of							{	tufts,	<i>Arachnopathes</i> , n. gen.
	{			{	{	{	smooth ; cœnenchyma siliceous elements,	{	containing	.
vitreous,		.	.							.

Milne-Edwards admits that with the little knowledge then available of the morphology of the Antipathidæ, it would be difficult to establish natural genera with certainty, and the arrangement proposed in the above table is given mainly with a view to aid in the determination of species. It will be seen that the generic name *Antipathes* is retained in a modified sense. Those forms having, or supposed to have, a vitreous sclerenchyma are separated under the name *Hyalopathes*; those having a chitinous axis and showing more or less complete fusions amongst the branches are allocated to two new genera. *Arachnopathes* includes those forms having the branchlets more or less collected into tufts, and *Rhipidipathes* those which, like *A. flabellum*, have a fan-like growth, and have the branches and branchlets confluent. Thus those species which remain to constitute the genus *Antipathes*, in *sensu* Milne-Edwards, may be shortly