

possible, the creation of synonyms I have decided to retain the generic name *Leiopathes* for this species, though I do so with considerable hesitation. In the first place the name has been associated only with such characters as are *not* of generic value, characters indeed which are deceptive or false. Then again, though it is generally accepted that Gray intended *Antipathes glaberrima*, Esper, as the type of his genus, we have no type specimen to refer to, and he is by no means clear on the subject. It is only because *Antipathes glaberrima*, Esper, has the greater portion of the axis smooth, and that its cœnenchyma has been found frequently to have spicules adhering to it, that the species can be made to agree with Gray's definition, and in this respect a dry specimen of *Savaglia lamarcki* would fulfil the conditions equally well. One result of this investigation is to bring out clearly the fact that so far as we know at present there are no species of true Antipathidæ in which the sclerenchyma is entirely without spines, the only species in which the axis is smooth throughout being *Savaglia lamarcki*, and this on morphological grounds has been removed to another family.

*Hyalopathes*.—This genus was proposed by Milne-Edwards, who gives the following short definition:—"Axe sclérobasiqne rameux, lisse et d'un aspect vitreux." He was led to separate the forms included in this genus on account of the semi-hyaline aspect of the sclerenchyma, which he supposed to be associated with a difference in chemical composition. Three species are included in the genus, all described by Lamarck, viz.:—*Hyalopathes pyramidata*, *Hyalopathes pectinata*, and *Hyalopathes corticata*. The first named, Milne-Edwards' type, has since proved not to belong to the Antipathidæ, and is now arranged in Verrill's genus *Iridogorgia* as *Iridogorgia pyramidata*. I find a fine specimen in the British Museum collection. The sclerenchyma is semitransparent, smooth, and undoubtedly has a vitreous aspect.

With regard to the second species, *Hyalopathes pectinata*, Lamarck only gives a very imperfect description, and so far as I am aware, it has not been identified by subsequent investigators. I find nothing in his description to give one the idea that the axis differs from the typical chitinous one of *Antipathes*, indeed he does not mention the colour of the axis, as is the case in his description of *Antipathes pyramidata*, but Milne-Edwards may have examined the type specimen. Lamarck describes the spines as few, but if they are present at all the species may belong to the Antipathidæ, although it would scarcely conform to the definition of the genus *Hyalopathes*. With the little information obtainable at present, I have been compelled to include this form amongst the *species dubiæ*.

The third species, *Hyalopathes corticata*, has since been observed by Haeckel, who gives a figure of a living colony in his Arabische Korallen. In the short description which Haeckel gives of this figure, he speaks of the sclerenchyma being black with a glassy aspect and as also being regularly spinose as in the Antipathidæ generally. These researches, though probably not sufficient to enable us to assign to this species its natural