

He makes no comment on the change, which is to be regretted, because it is still doubtful what species he selected as the type of his genus *Leiopathes*. Subsequent authors have accepted *Antipathes glaberrima*, Esper, as the type, and this view seems probable. I am unable to understand on what grounds he included *Antipathes boscii* in the genus *Leiopathes*, the essential character of which is that the axis is smooth instead of spinose. Presumably Gray had seen or thought he had seen a specimen of the species, or it should have been included in the special list, given at the end, of those species which had not come under his notice. It seems highly probable that his words, "Lamouroux's figures represent the bark forming small masses between the branchlets, as I have observed it on the Madeira specimen," refer to the supposed *Antipathes dichotoma*, Pallas, rather than to any specimen of the true *Antipathes boscii* which had come under his notice.

Under the genus *Antipathes*, Gray describes eight new species, one (*Antipathes gracilis*) a simple form belonging to the subgenus *Cirrhopathes*, all the others being more or less branched. All his diagnoses are very imperfect, and in nearly every case insufficient for identification. Fortunately the types of these forms, nearly all of which appear distinct, are in the collection of the British Museum, and have thus been accessible for reference. In the section devoted to the description of species, I have added to Gray's original diagnoses such particulars as seem of use in identification. Under the name *Antipathes spinescens* he appears to have included two forms of the "bottle brush" type, which differ considerably in general appearance and may be specifically distinct. For the type not conforming to Gray's description I have suggested the name *Antipathes spinescens*, var. *minor*. A species from Madeira which is referred to *Antipathes subpinnata*, Ellis and Solander, certainly does not belong to that species. Gray seems to have been doubtful on the subject, and admits that his specimen does not agree with Ellis and Solander's figure, and adds, "I had originally described it as distinct under the name of *Antipathes Wollastoni*." I have been unable to find any printed description of *Antipathes wollastoni*, and it does not appear to be described in any of his most numerous papers, a list of which is kept at the British Museum. It may be, however, that Gray only means that he had prepared a description, but that before printing it in the Synopsis under consideration, he decided that it was not a new form. In any case the specimen still bears the name *Antipathes Wollastoni* in Gray's handwriting, and as the species in question is quite distinct from the type of Ellis, I have retained that name for it.

Five other species observed by Gray are referred to: *Antipathes ulex*, Ellis and Solander, *Antipathes myriophylla*, Ellis and Solander, *Antipathes abies* (Linn.), Gray, *Antipathes larix*, Esper, and *Antipathes reticulata*, Esper, respectively. The first four are probably correctly identified, but the last named does not agree with Esper's figure and description. It is very slender, lacks the characteristic short stiff secondary pinnules, and the reticulum is not constructed on the same plan. The apical portions of the colony are free, and the