

Lamarck made two species—one of the naked sclerobasic axis (*Antipathes glaberrima*), and another of a specimen covered with cœnenchyma (*Gorgonia tuberculata*). Isolated polyps have been named *Palythoa denudata* and *Zoanthus* sp. The leading points of Lacaze Duthiers' investigation will be found under the genus *Savaglia* (*infra*, p. 51), and I will here only mention those bearing on the systematic position of the species. In the first place this form, for which Lacaze Duthiers creates the new genus *Gerardia*, has not a spinose axis nor does its cœnenchyma contain spicules peculiar to it, but only those which reach it from other forms and become adherent. It thus differs from Antipathidæ in the absence of spines. The sclerenchyma is thin and horny, and is primarily secreted around the axis of some other form, usually one of the Muriceidæ, so that the mode of branching is not characteristic of the *Gerardia*, but of the particular species on which it becomes parasitic. In older specimens where the stems and branches extend beyond the Gorgonid basis, its growth becomes bushy. The polyps have twenty-four tentacles arranged in two rows of twelve each, and each tentacle corresponds to an interseptal chamber as in true Actiniaria. There is also a system of canals in the cœnenchyma, bringing the whole of the polyps of a colony into communication.

In his second memoir Lacaze Duthiers (45) gives an account of the structure of *Antipathes subpinnata* and *Antipathes larix*, which have only six tentacles. Here too he confirms the surmise of Dana, that the Antipathidæ are closely related to the Actiniaria. The mesenteries bearing reproductive organs, which Dana supposed to exist, are described and figured by Lacaze Duthiers from living or fresh specimens. The mesenteries are, however, unequally developed. He describes six: two principal ones bearing reproductive organs placed in a line parallel with the branchlet on which the polyp is placed dividing it into two similar halves, and four others less fully developed and destitute of reproductive organs, two in each lateral portion of the polyp. No sections were made, but so far as could be made out no system of canals in the cœnenchyma similar to those of *Gerardia* are visible externally, though Lacaze Duthiers supposed them to be present.

On account of these researches of Lacaze Duthiers, and the interesting morphological points which they bring out, the Sclerobasic Zoantharia have been divided by Verrill (46) and others into two suborders:—

GERARDIDÆ, with twenty-four tentacles and mesenteries,	genus <i>Gerardia</i> .
ANTIPATHIDÆ, with only six tentacles,	genus <i>Antipathes</i> , &c.

In 1868 Heller (50) recorded two species as occurring in the Adriatic, viz., *Antipathes subpinnata*, Ellis and Solander, and *Leiopathes glaberrima* (Esper), both forms already known from the Mediterranean.

Verrill, in a review of the Polypi of the East Coast of the United States (48), mentions only two species, *Antipathes boscii*, Lamouroux, collected by Agassiz, near Charleston, and *Antipathes alopecuroides*, Ellis and Solander, the latter on the authority of Ellis.