

are perhaps similar to the irregular papillary spiculæ found in the bark of *Gorgonia*, are scattered through the bark of this species of *Antipathes*, and the axes of its smaller branches are minutely tubular." Gray's observations on the polyp are no advance on the information already supplied by Ellis, excepting that he doubts the existence, in the species studied, of the cup-like oral aperture with a crenate margin figured by that author. I am, however, induced to discuss them at greater length on account of the questionable identity of the species referred to, and also because this form possibly constituted the type of his new genus *Leiopathes*.

In his second paper Gray states that the species formerly observed "has been separated from the others of the genus because the surface of the axis is smooth and not covered with a number of minute, uniform cylindrical spines like the true *Antipathes*, and has been called for that reason *Leiopathes*," evidently referring to his note of 1842 already mentioned. He then goes on to describe the appearance of the "bark" of a long simple-stemmed *Antipathes* from the Seychelles, which he regarded as a new species allied to *Antipathes spiralis*, Pallas, "if more than a very fine straight specimen of that species." The cœnenchyma is stated to contain flakes of a substance insoluble in strong hydrochloric acid or caustic potash, and supposed to be siliceous. This paper is illustrated by a plate, from which I have been enabled to identify the specimen now in the British Museum collection. It apparently belongs to *Cirrhopathes anguina*, Dana, and although dry, shows the same arrangement of polyps (and spines?) as figured by that author. The identity of the species referred to in the earlier paper is not so certain. Undoubtedly it is not *Antipathes dichotoma*, Pallas, as Marsigli, from whose work Pallas took his description, not only notes the presence of spines, but figures their arrangement both near the base of the stem and on a more slender pinnule. I have been unable to find any specimen of *Antipathes dichotoma*, Pallas, in the British Museum collection, but am disposed to think that a specimen of *Antipathes glaberrima*, Esper, the locality for which is not stated, may be the species referred to by Gray. In this species the axis is perfectly smooth and glossy in the older portions of the colony, and the cœnenchyma has been stated sometimes to contain, or rather have adhering to it, the spicules of various Axifera, sponges, &c.

Later in the year Gray (40) contributed to the same journal a Synopsis of Axiferous Zoophytes, in which he included the Antipathidæ. He divides the axiferous zoophytes into three suborders, in the third of which, Ceratophyta, the Antipathidæ form the first family. He describes three genera, *Leiopathes*, *Antipathes* (with a subgenus, *Cirrhopathes*), and *Sarcogorgia*. Under the genus *Leiopathes* he includes two species, viz., *Antipathes glaberrima*, Esper, and *Antipathes boscii*, Lamouroux. The species of which he described the polyps in 1832 and then named *Antipathes dichotoma*, Pallas, he evidently now regards as *Antipathes glaberrima*, Esper, and queries the two as synonymous, and in referring to his original note quotes the name *glaberrima* instead of *dichotoma*.