

pathidæ which has come under my notice. The whole muscular system is apparently rudimentary, and, so far as I know, there is no sphincter muscle present in Antipathidæ which could cause such an appearance. Indeed, the following quotation from Lacaze Duthiers shows that the contraction is general, and not brought about by a special aggregation of muscular fibres. He says: "Leur tissu se contracte, et tout le Polype forme un mamelon froncé à son sommet, mais sans jamais masquer absolument la bouche et les tentacles" (p. 22).

The spines are short and triangular near the apex of a pinnule, but gradually become more elongate and cylindrical on passing further away from it. Lacaze Duthiers gives a very good figure of the triangular form (45, pl. iv. fig. 18).

The subcylindrical form of spine approaches the *Aphanipathes* type. The spines are relatively long and slender, having a length greater than the diameter of the axis. The spines ultimately become needle-like, with a very slight taper and a sharp point. They are arranged in longitudinal rows, five of which may be counted from one aspect on moderately slender branchlets. The members of a row are about one length apart, and a subspiral arrangement from left to right is often noticeable. The spines are all bent sharply upwards at an acute angle with the axis, and some are distinctly incurved, others bifid. In this species the spines appear to increase in length on the older portions of the corallum, and the earliest (triangular) form passes through a conical phase before reaching the subcylindrical one just described (Pl. XII. fig. 15).

Habitat.—Mediterranean (Ellis, Lacaze Duthiers); in 135 fathoms, Naples Zool. Stat.

Antipathella? strigosa, n. sp. (Pl. XII. fig. 11).

Stem straight, erect, distinctly tapering, 15 cm. long. Branches few, irregularly placed, 3 to 6 cm. long, usually bent upwards subvertically. The stem and branches are clothed with a number of spirally arranged, distant, hair-like pinnules 1 to 5 cm. in length, the lower ones long and bent upwards, those on the upper part of the stem spreading; all are simple. Spines triangular, flattened, the apex standing out almost at right angles to the axis; they have a length about equal to two-thirds the diameter of a pinnule. A spiral arrangement is not apparent, but the spines are distributed in longitudinal rows, five or six of which may be counted from one aspect. The members of a row are relatively far apart, being separated by an interval almost equal to three times the length of a spine. The zooids are small and distant, and are very imperfectly preserved. If they agree with the characters of *Antipathella*, they are more distant than those of any other species known to me. The species appears closely allied to *Antipathella boscii*, (Lamx.), both in the form of the corallum and in the type of spine. The pinnules are, however, always simple.

Habitat.—New Zealand (purchased at the Colonial Exhibition in London, 1886), Brit. Mus.