

stem angles of 45° to 50° , and are directed upwards, forming a thick bush. The polyps are large, cylindrical, expanded at the apex, 4 to 6.5 mm. long and 2 to 3 mm. in diameter at the mouth. The mouth is surrounded by eight large divergent bundles of spicules. The polyps project perpendicularly from the twigs. They form short spirals on the stem, which always consist of three polyps, each of which is separated by a distance of up to 2 mm. from the other. On the branches and twigs they are similarly arranged, only towards the summit they are more closely crowded. The cœnenchyma is thin, transparent. The axis is fibrous, soft, brown, in the thinner branches and twigs yellowish.

The spicules in the cœnenchyma are bent spindles which are placed close together and generally lie in the longitudinal direction of the axis. They are thickly covered with sharp spines, 0.4 mm. long and 0.04 mm. in diameter. There are in addition also smaller, strongly bent spicules, much thickened in the middle part, 0.2 mm. long and 0.18 mm. thick in the middle. In the polyps the large, spindle-shaped spicules are not so regularly placed as in the other species; it is not possible to distinguish eight rows, but the calcareous spicules lie thickly, placed over one another in various manners, and it is only at the end of the calyx that they form a distinct peripheral ring. They are thickly covered with fine, sharp spines, and are mostly more or less bent. They measure 1 mm. in length by 0.5 to 0.04 mm. in breadth. The spicules forming the eight bundles which surround the mouth reach 2 mm., and are either spindle-shaped and bent, or straight and somewhat thickened at one end, 0.5 mm.; they are always strongly warty. In the peripheral crown on the margin of the polyp there are triradiate spicules, 0.26 mm. in length, and also knee-shaped, bent, club-like bodies which bear on the convex bend two divergent processes, 0.25 to 0.05 mm. These forms call to mind those of the following genera. The colour of the colony in alcohol is yellowish.

Habitat.—Station 145, off Prince Edward Island; depth, 310 fathoms; bottom, volcanic sand.

Genus 2. *Paramuricea*, Kölliker.

Paramuricea, Kölliker, Icon. Histiol., p. 136, 1865.

Villogorgia, Duch. and Mich., *emend.* Ridley, Ann. and Mag. Nat. Hist., vol. ix. p. 187, 1882.

Paramuricea, Verrill, *emend.*, Bull. Mus. Comp. Zool., vol. xi. p. 34, 1883.

This genus was originally established by Kölliker for some species of the old genus *Muricea*, Lamk. Kölliker diagnosed the genus as one in which "the polyp spicules formed large and well-developed opercular coverings upon the short, cylindrical calyces; the spicules sometimes conical-shaped, at other times with large prominences. The cœnenchyma spicules spindle-formed, with papilliform processes; either shorter or longer needle-like prominences projecting perpendicularly outwards or giving origin to three or four stellate forms, of which one ray is tooth-shaped."

Muricea placomus, Ehrbg., *Villogorgia nigrescens*, Duch. and Mich., and two new