

bear only a few polyps. One side of the stem remains completely free. The polyps arise from the stem, branches and twigs; on the opposite sides only, irregularly alternating at distances of 2 to 2.5 mm.; only in isolated places there occurs between these a third row of polyps, but one face of the stem and twigs always remains free from polyps; towards the apex, where the polyps become very numerous and follow close upon one another, the entire periphery of the twig is occupied by them. The polyps stand up perpendicularly from their bases; they are cylindrical, slightly expanded at the end, 3 to 4.5 mm. long and 1 to 1.5 mm. in diameter; the bundles of spicules which surround their edges, to the number of eight, are relatively short. The cœnenchyma is very thin and transparent; the axis is horny, fibrous, soft and flexible, in the finer twigs flabby. In the stem and branches it appears flattened on one face. Its colour is a yellowish-brown.

The spicules are transparent spindles with only a few sharp spines. In the cœnenchyma they are placed in thick longitudinal series; those whose edges bear only a few blunt teeth measure 0.3 mm. and 0.05 mm.; isolated ones appear rounded at one end and slightly bent, 0.25 mm. long and 0.023 mm. thick, or these are slightly forked at one end, 0.25 mm. long and 0.07 mm. at the thicker end. At the bases of the polyps there are also peculiar spicules which are constricted in the middle and produced at both ends into two diverging arms, 0.3 mm. in length, and with a divergence of 1 mm. The spicules in the polyps form eight longitudinal rows; in each, two rows of needles are directed convergently towards one another, so that two always form an angle whose apex is directed towards the edge. The angle becomes blunter towards the apex of the polyp and at the base of the tentacles the spicules are placed in a peripheral ring. These spicules are slightly bent and curved with a few sharp warts, 0.46–0.025; 0.67–0.05 mm. The spicules of the diverging bundles are up to 0.83 mm. long and 0.07 mm. broad. The spicules of the tentacles are thin, with sharp spines and prickles, and are mostly thickened at one end, 0.2–0.025; 0.23–0.016; 0.33–0.05 mm.

*Habitat.*—Station 308, off Tom Bay, Patagonia; depth, 175 fathoms; bottom, blue mud.

4. *Acanthogorgia ramossissima*, n. sp. (Pl. XXII. fig. 4; Pl. XXVI. fig. 7).

Colony upright, strongly and densely ramified. The stem rises to 145 mm., and has at its base a diameter of 3 mm. It is upright, somewhat flattened in one plane and spirally twisted in its course. The branches arise from three sides of the stem at short intervals of from 2 to 4 mm. In two opposite directions, in one plane they are strong, up to 2 mm. in thickness at the base and up to 50 mm. long; and these give off simple lateral twigs in two directions. Between these branches smaller branches arise in a median row, with small lateral twigs; they reach a length of 20 mm. All the branches form with the