

twigs lie all in one plane. The cœnenchyma on the stem and larger branches is thick, on the twigs thin and transparent. The polyps are large, cylindrical, and up to 4 mm. in length. They have a broad base and are placed obliquely to the stem. They are numerous on the stem and on the main branches, so far as one can tell in the uninjured places, there are as many as four in a spiral in one internode; on the thinner twigs there are two, laterally placed, in an internode, on the terminal twigs three or four. In addition to the polyps there are, in the cœnenchyma of the larger branches and of the stem, zooids without tentacles. These form conical structures which project 0.5 mm. above the cœnenchyma. They are placed abundantly between the polyps, and are recognisable with the unassisted eye as little warts.

The axis is hard, horny, in the stem and in the thicker twigs inflexible and brittle, in the finer ramifications flexible and elastic. Its surface is shining, with very intense metallic reflections. The spicules of the cœnenchyma are lancet-shaped, flat, somewhat iridescent bodies, which lie close together and partially overlap one another on opposite sides; they are continued into the zooids, in which they are longitudinally placed. In the polyps the spicules are transversely placed, overlapping, broad oval to lancet-shaped scales, which are finely toothed at the edges; in the tentacles there are longitudinally placed, broad spicules, with truncated ends, sometimes forked on one side.

This form would show a very different ramification from the other species of the genus, if we had before us, in the existing fragment, devoid of the lower end, a complete colony. But the whole mode of ramification agrees so completely with that of a single branch of the species hitherto considered, that we may pretty safely assume that we are here only dealing with the torn-off branch of a really gigantic colony.

The main stem has at its lower end a diameter of 5 mm., it gives off immediately, on one side, a branch of 3 mm. diameter, and 9 mm. higher up a branch of 3.5 mm. diameter; at these points it undergoes an angular bending towards the opposite side, and then, after giving off another thick branch, 4 mm. in diameter, at a distance of 45 mm. higher up, in the direction of the former, it is produced into a tall portion bent in a zigzag manner. The height of the portion which may be regarded as the main stem reaches 300 mm. At each angle which the stem forms thinner branches arise, which again bear twigs, and the three stout branches behave in the same way; the last fine twigs of the latter belong to the fifth and sixth order. Each of the larger branches, like the main stem, gives off, in addition to three or four twigs which have the same thickness as their main stem, numerous smaller twigs, which undergo further ramification only to a slight extent. Branches and twigs come off at acute angles; their internodes are large, in the larger twigs 9 to 10 mm. long. The entire ramification takes place in one plane. The colony may be characterised as branched in a one-sided, fan-like manner.

The cœnenchyma on the thicker branches is thick and easily stripped off; on the thinner twigs it is transparent. The polyps stand upright on the stem and thicker