

cœnenchyma, upon which the calyces of the polyps are borne at right angles and arranged in spirals.

The main axis rises in a sinuous course, taking an opposite direction at the origin of each branch. It attains a length of 150 mm., with a diameter near the base of 3 mm. and in the upper third of 2 mm. It is not cylindrical, but is flattened at the sides where the branches are given off. These branches, of which the lower ones are as strong as the main axis, arise alternately from the two sides. They arise at an angle of about  $45^\circ$ , but usually curve upwards and take a more vertical course. They attain a length of 120 mm., but decrease towards the apex, so that their apices are on a level with the end of the stem. The larger have a sinuous course like the stem, and are similarly flattened. In a similar manner twigs are given off by the branches; they are very flexible, and here and there bear small secondary twigs. They have a length of 25 to 60 mm., being somewhat thickened terminally.

The cœnenchyma covering the axis is thin, and in a dry condition easily separable. The calyces spring from the stem, branches and twigs, in irregular spirals at intervals of 2 to 2.5 mm. The twigs are terminated by two or three polyps, between which protrudes a blunt stolon. They are cylindrical, terminally truncated, or, at most, slightly thinner in the middle than at either end. The mouth is closed by the folded tentacles, the bases of which form a distinct cover. Their height is 1.8 mm., and the diameter of the upper part 1 mm.

The spicules of the cœnenchyma are in part curved, in part straight spinose spindles, which are arranged in irregular longitudinal lines. They often, however, lie obliquely and transversely to the long axis, and thus cross in manifold fashion. The spines covering them are mostly blunt or abruptly terminated, and loosely distributed. They are continued on the calyces, where they lie partly oblique, partly straight, frequently crossing one another. Their dimensions are 0.93 by 0.078 mm.; 0.84 by 0.096 mm.; 0.63 by 0.06 mm.; 0.73 by 0.07 mm.; 0.78 by 0.084 mm.

The oral region of the polyps bears a collar, composed of curved spicules; it is usually retracted within the calyx margin to the base of the tentacles. The spicules are arranged in threes, two of which converge towards the end of the tentacle, the third lying between them. These spicules form a protective cover to the tentacles, and are found up to the very apex. The oral spicules have the following dimensions:—0.33 by 0.053 mm.; 0.33 by 0.04 mm.; 0.27 by 0.03 mm. In the spindles of the tentacles the spines are fewer and less strongly developed. The axis is yellowish brown, horny, fibrous, and flexible, almost limp in the thinner twigs.

The colour of the colony, in spirit, is brown.

*Habitat.*—Station 232; lat.  $35^\circ 11' N.$ , long.  $139^\circ 28' E.$ , off Japan; 345 fathoms; green mud.