

cases branch, lie apposed to one another, and anastomose freely. The narrow (from 2 to 4 mm. in diameter) tubular branches, which project externally, open outwards by means of simple circular terminal openings. Here and there, but especially in the neighbourhood of the upper extremity, there are also broad tubes, which are curved outwards in a trumpet- or funnel-like fashion, and terminate with a wide irregularly rounded margin.

The entire system of these simple or branched and anastomosing tubes, which pass out laterally from the central space, increases in thickness upwards, and is from 1 to 4 cm. broad. It forms a covering to the outer side of the cup, on the upper terminal margin of which a certain outward curvature exhibits the structure of the tubework. If one looks through the large terminal opening into the lumen of the cup—the gastral cavity—one sees the oval or circular inner openings of the tubes, which increase in diameter upwards, and have a radial direction.

In another specimen represented on Pl. LXXX. fig. 2, the stalk and basal plate are absent, and the axis of the cup is unbent. The greatly developed system of branched and anastomosing lateral tubes increases in extent towards the top, but is much injured and broken towards the thin margin of the cup, so that the latter are clearly marked in the figure, and disclose the transverse beams of the often very obvious square-meshed dictyonal framework.

Close above the stalk the wall of the cup measures 2.5 mm. in thickness, in the middle of the body 1.5 mm., and on the upper margin only about 1 mm., *i.e.*, the thickness the wall in the individual wall-tubes.

A third cup belonging to the same species was greatly weathered, and only its inferior part was preserved. It exhibits, like the first mentioned, a slight bending of the axis, and seems to have belonged to a very strong specimen, as it was borne upon a pedicel more than 2 cm. in thickness.

A plate-like fragment with the well-preserved soft body, from 1 to 1.5 mm. in thickness of the wall, exhibiting an irregular tubular form, and probably referable to the greatly expanded upper lateral tubes of a large cup, occurred among fragments of *Farrea*, *Eurete*, and *Aphrocallistes*, in the materials collected by Dr. Döderlein in the Bay of Sagami, and preserved in alcohol. I have figured this piece on Pl. LXXXI. fig. 1, and have used it especially in the study of the soft parts as well as of the more minute structural relations of *Periphragella*. The beams enclosing the somewhat regular square meshes of the dictyonal framework are either quite smooth, or beset more or less richly with small simple spines. The free terminal bosses are always thickly spinose. The nodes of intersection exhibit no marked thickenings.

I have found uncinates only sparsely, and not always at right angles to the bounding surface. They vary in length and thickness, and are surrounded by barbs. The parenchyma includes a large number of scattered hexasters of two different types. Of less