

two dorsal folds remain longer demonstrable. The mesoderm wall of the polyps becomes thicker from the apex towards the base, while the diameter of the gastral cavity remains always the same. In the oesophageal region one can distinguish in the upper part, outside the endoderm, a thin structureless layer which is continued into the mesenteric folds. Outside of this lies the gelatinous layer which contains the spicules. In decalcified preparations the sheaths of the spicules may be recognised, sometimes with a trace of the nucleus of the spicule-producing cell. Below the tentacles narrow endodermic canals may be seen to penetrate; they ramify in the mesoderm, and are connected by fine processes with the gastral cavity of the polyp. In the oesophageal portion these nutrient canals dilate to form lacunæ, which in part fuse together (fig. 6) and finally unite further down into longitudinal canals continued on (fig. 7) towards the base. By the increasing thickness of the mesoderm these canals are pressed more and more towards the periphery, while round the central canal the spicules become aggregated to form a sort of axis, which is not, however, definitely limited externally. Between the aggregated spicules a few lacunæ and fine nutrient canals may still be seen. Towards the base the longitudinal canals attain a width which in part exceeds that of the gastral cavity, and at the same time the spicule-containing mesoderm acquires a more considerable thickness. The central canal can then be distinguished with difficulty, and only by its position from the other canals. A cross section of the main axis presents a sieve-like appearance, and reminds one in some degree of the cross section of *Paragorgia*. The canals are continued into the basal expansion, and there exhibit an irregular network.

The axial polyps of the second and third order exhibit a structure quite analogous with that of the above. At their base, however, they are not proportionately thickened, but remain approximately cylindrical. They spring from the lacunæ in the wall of the axial polyps of the first order.

The lateral polyps are club-shaped, 3 mm. in length, at their origin 1 mm. in thickness, but increasing at their ends to 1.2 to 1.5 mm. (fig. 3). They arise at obtuse or at right angles from the axial polyps. Occurring at intervals of 1 to 1.5 mm. from one another, they form spirals in which the fifth polyp comes to lie over the first. Their structure (fig. 5) is essentially the same as that of the axial polyps. The tentacles again appear as simply folded together over the invaginated oral region. The oesophageal tube narrows suddenly below, but the narrow tube into which it is continued is continued laterally on the base of the wider portion, and that on the side turned towards the stem, so that the polyp acquires a bilateral appearance. The gastral cavity is short, and is connected by means of canals, which spring from the base, with the canalicular system of the axial polyps. In the wall of the polyp also nutrient canals are distributed, and the polyp may by longitudinal growth and production of buds develop into an axial polyp.