nearer to the external surface; for here the meshwork is much closer, and the mass of soft living tissue much greater in proportion to the calcareous structures secreted by it, than is the case in the deeper regions. Further, the deeper canals are of greater calibre than those nearer the surface. Towards the deepest regions of the cœnosarc the canals are shrunken and atrophied, and pass off into effete and almost dead fragments of tissue, which form the inner boundary of the living lamina.

The largest trunks of the meshwork are those which proceed directly from the bases of the zooids and gonophores. These are soon reduced in size by branching, and are lost in the general anastomosis.

Around the sacs containing the zooids the canals of the cœnosarc have a special radiate disposition (Pl. X. fig. 3). The radial canals occupy an area circular in outline extending all around the outer sides of the sacs of the zooids. They pass directly inwards radially, from the margins of the areas where they take origin from the general meshwork to join themselves on to the walls of the zooid sacs, towards the centres of the areas. They branch but seldom on their course, and then only towards their outer origins where they not uncommonly bifurcate.

As may be seen from the figure, the radial canals, which lie at successive depths from the surface, do not correspond in any way in position with those above or below them, but are quite irregular as far as radial disposition is concerned. In vertical sections, however, of the living lamina (Pl. III.), these radial canals are seen to succeed one another at tolerably regular intervals, in vertical disposition, with a somewhat regular series of interspaces between them.

This radial disposition of the canals is less marked around the sacs of the larger dactylozooids than around those of the gastrozooids, and is hardly apparent around those of the smaller dactylozooids. Traces of it are to be seen around the sacs of the gonophores, as at G′, Plate XXXVI. Although towards the periphery of the area occupied by them these radial canals contain endoderm cells, and appear similar in structure to the other canals of the cœnosarc, towards their inner extremities, where they join the zooid sacs, they become diminished in size, and often appear as mere slips of transparent tissue having a fibrillate appearance.

Muscular filaments, continued from ovoid muscular cells embedded in the walls of the zooid sacs, pass outwards along the radial offsets, and are attached to them in the region about the mouths of the sacs (Pl. X. fig. 3, RM).

Attached to the radial offsets, and often extending over the interspaces between adjacent ones, slips of a fine transparent membrane, containing minute nuclei and striated in appearance as if composed of fine fibrillæ, are constantly to be seen; but they seem to occur at altogether irregular intervals, and only towards the more superficially lying parts of the zooid sacs (Pl. X. fig. 3; Pl. III. AA).

A continuous layer of ectodermal tissue extends over the outer surface of the coral.