

breaks away entirely, allowing the escape of the imprisoned planula. The empty hollows remaining after this process is complete are abundantly present on the surfaces of the branches, and are often to be seen remaining on the older regions of the main stems, although in these older regions there is a tendency to obliteration, by interstitial calcareous deposit, of all pores and ampullæ.

The mass of the cœnosteum is composed, as in other Stylasteridæ, of hard calcareous tissue permeated in all directions by meshworks of canals. The canals generally are, in the present genus, larger in proportion to the size of the zooids than in most other forms (Pl. IV.), and the meshworks formed by them are comparatively widely open. The main canals have a general tendency to traverse the axes of the stems and branches, spreading out at an inclination corresponding with that of the pure cavities towards the surfaces. This arrangement necessarily results from the mode of growth. In the older regions of the stem the cœnosteum becomes more compact and stony by obliteration of many of the canals, but the main canals appear never to become entirely obliterated even very low down towards the bases of the stems.

Soft structures of *Errina labiata* (Pl. IV.).

Cœnosarc.—The cœnosarc meshwork in *Errina labiata* is more widely open in its structure than in *Sporadopora dichotoma* (Pl. IV.). Hence the mass of soft structures separated from the cœnosteum by decalcification is comparatively soft and less able to maintain the original form of the corallum. In the present species, however, in all the actively living branches it is not, as in *Sporadopora dichotoma*, a mere surface layer of the coral which is living supported by dead cœnosteum below, but the deeper canals of the cœnosarc retain their vitality even to the very axes of the branches. The general arrangement of the cœnosarc canals is seen in Plate IV. Closer meshworks compose the mass near the surface, and in deeper regions the canals are larger and form wider and longer meshes, and constitute an axial system of main canals by which the various distant zooids are brought into relation with one another. Around the sacs of the gastrozooids an irregular radial arrangement of the canals immediately adjoining the sacs is to be observed, representing the more regular radial disposition described as existing in *Sporadopora dichotoma*.

The histological structure of the cœnosarc canals is closely similar to that occurring in those of *Sporadopora*. The endodermal pigmented cells are of a light brick-red colour, and hence the entire coral in the recent state is thus coloured. The pigment is, however, soluble in alcohol, and thus quickly extracted in specimens preserved in that fluid, but it is insoluble in glycerine. A continuous superficial layer is present on the surface of the coral, as shown in Plate IV., and it is composed of polygonal nucleated cells (Pl. XI. fig. 10).