

which vary from about 0·03 to 0·05 mm. in thickness; at the margins of the chones small fusiform cells are accumulated, but do not appear to form a sphinctral ring, nor is any special sphincter to be observed at their inner ends, which open freely into the incurrent canals of the choanosome.

On approaching the oscules the microstrongylose layer is thickened to form the marginal lip (Pl. XXVIII. fig. 15); and the cortex, reduced in thickness and otherwise modified, as by the gradual disappearance of the sterrasters, is continued inwards as the cloacal wall. In a recess of this, just below the oscular margin, the wall presents the structure shown in fig. 18, Pl. XXVIII. It consists of a layer of apparently homogeneous matrix, 0·07 mm. thick, staining with hæmatoxylin, and containing various apparently cellular structures; most exterior are slender threads about 0·02 mm. long, directed at right angles to the outer surface, ending at one extremity against it, and at the other enlarging into a rounded or fusiform body, from which are continued one or two slender thread-like processes deeper into the interior; in some cases these can be traced into connection with somewhat similar but stellate corpuscles which lie in about the middle of the layer; nearer the inner face of this, where it adjoins the sarcenchyma of the choanosome, are similar fusiform bodies lying tangentially. I have spoken of the matrix as only apparently homogeneous, because in some sections it appears to be divided up into oval or rounded polygonal masses about 0·02 mm. in diameter, each enclosing one of the more deeply stained bodies alluded to as a corpuscle; and bounded by pale linear interspaces. It would thus appear that the smaller more darkly stained body is not the whole cell, but only a differentiated part of it. I do not venture to offer an opinion on the significance of these appearances, which appear, however, worth recording.

*Choanosome.*—The mesoderm is a well-marked sarcenchyma, and, except about the openings of the chones, seldom becomes collenchymatous; the incurrent and excurrent canals are not provided with collenchymatous walls; a sarcenchymatous wall of no great thickness, the sarcencytes of which are usually elongated or fusiform in shape, is, however, sometimes present. Occasionally by a modification of the ectosarc these cells pass into fusiform collencytes. As a consequence of the absence of thick walls, the canal system presents a strikingly open appearance, and velar diaphragms are rare. Scattered through the sarcenchyma are pigment-cells (Pl. XXVIII. fig. 22), which become more numerous in the neighbourhood of the larger canals. They have the same characters as those of the cortex, and are traceable into cells composed of spherical colourless granules which take a deep stain with hæmatoxylin; sometimes one meets with a cell half composed of these protoplasmic granules and half of the pigment-granules into which they become converted. The cells composed of protoplasmic granules are probably derived from deeply staining amœboid cells, possessing a large nucleus and nucleolus, that are found here and there within cavities of the sarcenchyma (Pl. XXVIII. fig. 21). In addition to pigment-cells numerous oval darkly stained bodies of a problematical character are