

subcortical crypts. These are surrounded by collenchyma containing numerous fusiform cells, which are collected in places into fibrous strands or felts.

The walls of the larger canals in the choanosome are similarly constituted. The velar diaphragms of these canals consist of a middle layer of fusiform cells, faced on each side by epithelium, on the inner face of which chiasters are abundantly scattered. The fibrous tracts extending from the cortex along the sides of the spicular bundles are strongly developed. The flagellated chambers are small, about 0·022 by 0·02 mm. in breadth and length, they communicate by long aphodal canals with the excurrent canals, and with the incurrent canals by prosopyles (Pl. XX. fig. 8).

The chones have the irregular form usual in the genus (Pl. XX. fig. 7).

The bands for attachment are smooth, tough processes of the cortex, often attaining a length of 5 mm. or more. The attachment to a foreign body is brought about simply by an accurate adaptation of the two surfaces, that of the foreign body and that of the end of the process, to each other. A longitudinal section of an average-sized band is shown in Pl. XX. fig. 10. A narrow longitudinal fissure in the interior, continuing the direction of an irregular cleft at the attached end and lined by epithelium, remains to indicate the origin of the process in two outgrowths of the cortex, that have subsequently coalesced. A curved fissure, as shown in the figure, separates a more solid lower part from a cavernous upper part. The latter consists chiefly of collenchyma excavated by numerous irregular cavities, and containing numerous vesicular and fusiform cells. The lower part is almost entirely composed of fusiform cells, lying in a stained matrix and running longitudinally downwards; in fig. 11, which is turned sideways up, these are shown much folded by the contraction of the surrounding tissue. Between the fusiform cells oval unstained granule-cells occur, singly and in strings of two or three or more (fig. 9). Associated with these granule-cells are others of similar size, consisting of darkly-stained protoplasm, enclosing two or three vacuoles and a nucleus; these appear to be the parents of the granule-cells; other granule-cells in a state of exhaustion are present. The attached surface of the process is invested with epithelium, against which the fusiform cells terminate in the manner shown in fig. 12.

The margins of the longitudinal fissure are represented as transversely striated in fig. 10. This is the appearance they present under slight magnification, more powerful objectives resolve this striation into a layer of small fusiform cells. At one end of the fissure these are continued into the general fibrous structure of the band, but elsewhere they are more or less separated from the main mass of fibres by the stained matrix of the fibrous tissue, free from fibres, but containing two or three dark irregular blotches, which have somewhat the form of multipolar ganglion cells. The fusiform cells are darkly stained and about 0·04 mm. long, and the amœboid cells, which look like blotches, occur near their inner ends. In any other position one might, but for their excessive numbers, suspect these fusiform cells of a sensitive function.