

homogeneous, and contains only small rounded protoplasts. In several sections examined no vessels were found; so that, if they are present in this test, they must be few in number.

Sections through the peduncle (Pl. XII. fig. 2) show it to have a structure very similar to that of *Culeolus murrayi*. The matrix is like that of the test covering the body, and contains similar minute rounded protoplasts. It is perforated by several large holes (Pl. XII. *ped. c.*), the sections of large tubes running longitudinally along the peduncle, and each of them containing a large blood-vessel in its interior.

The outer surface of the peduncle has adhering to it a considerable quantity of sand-grains, Foraminifera, shell fragments, &c., and in the sections one finds similar particles imbedded in the matrix often far distant from the surface (Pl. XII. figs. 1 and 2). These have doubtless become surrounded by the outward growth of the peduncle.

*The Mantle* is very thin, and has the form of a delicate membrane adhering closely to the inner surface of the test, from which it is separated with difficulty. The musculature is feeble, consisting of a series of distant transverse bands crossed by slighter and more irregular longitudinal bands.

*The Branchial Sac* is a coarse network—the vessels being strong for the size of the body. There are several longitudinal folds on each side of the sac, but they are very slight. The internal longitudinal bars are wide and prominent. They are regularly placed, and are apparently the strongest part of the network. The transverse vessels are all of the same size, but they are irregular, and are much slighter than the internal longitudinal bars. Usually the meshes are rather large and are elongated longitudinally (Pl. XI. fig. 5, and Pl. XII. fig. 3)—the breadth being about three-fourths of the length, but occasionally irregularly placed intermediate transverse vessels (Pl. XI. fig. 5, *tr'*) are present, and sometimes oblique or longitudinal vessels (*l.v.*), usually of small calibre, are given off from the transverse vessels, thus breaking the mesh up into compartments, and suggesting the formation of true stigmata.

The calcareous spicules are not at all prominent, on account of their small size, but they are pretty numerous, and often ramify considerably (Pl. XI. fig. 5, and Pl. XII. fig. 3, *sp.*). They are mostly more branched and more irregular than those of either *Culeolus murrayi* or *Culeolus wyville-thomsoni*. As usual they are present chiefly in the internal longitudinal bars.

*The Endostyle* is broad and distinct. The prominent edges have a creamy white tint, while the groove is brown (Pl. XII. fig. 4).

Calcareous spicules are not present in such numbers as in either of the preceding species. The raised edges (*w.e.*) in which they are situated are semi-transparent, and each equals in breadth about one-fifth of the breadth of the entire organ. The spicules are large and considerably branched but are not numerous. They resemble those of the central part of the endostyle of *Culeolus murrayi*.

Inside each edge is an opaque brown area of about the same breadth as the edge (*l.b.b.*),