

Specimen.	Length (antero-posterior).	Breadth (dorso-ventral).	Specimen.	Length (antero-posterior).	Breadth (dorso-ventral).
19	19 cm.	10.5 cm.	25	25 cm.	11 cm.
20	19 "	13 "	26	26 "	13 "
21	20 "	9 "	27	26 "	15 "
22	20 "	10 "	28	29 "	14 "
23	21 "	12 "	29	30 "	16 "
24	24 "	15 "	30	33 "	17.5 "

The test is leathery in texture and is rather thin (varying from .3 to 3 mm.) but very tough. It is quite opaque. In the upper (anterior) part, in young specimens, it is smooth and shining, while in older ones it is wrinkled and somewhat irregular and rough. A large part of the posterior end, varying from one-third to two-thirds (and even in some specimens to three-quarters on the left side, which is always more incrustated than the right) of the total length, bears numerous long delicate hairs to which sand is attached (Pl. IV. fig. 1) in such quantity as to form towards the posterior end a solid coating often 6 mm. in thickness. As Cunningham observed there are frequently quantities of Hydroids, Polyzoa, and Compound Ascidiens attached to the outer surface of the test.

It varies greatly in colour. In young specimens it is a pale greyish blue or slate colour, and is smooth and shining; while in older specimens, where it is rough and irregular, the colour is much darker, and varies from a dirty blue to brown.

In minute structure the test is composed of a translucent matrix in some places homogeneous, but generally slightly fibrillated, especially near the inner surface where the fibres are distinct and run parallel to the surface. In this matrix lie minute rounded protoplasts and a few larger bladder-cells, and towards the outer surface numbers of yellow and brown pigment cells, forming a distinct dark-coloured zone. Vessels are present here and there, but are evidently feebly developed. The inner surface is lined by a layer of columnar epithelium (the ectoderm).

The mantle is rather thick, except on the centre of the right and left sides where it becomes membranous. The muscle bands are yellow, and are numerous and stout. They are especially developed on the branchial and atrial siphons, forming powerful sphincters, over the anterior end, down the dorsal and ventral edges, and round the posterior end.

The branchial sac (Pl. IV. figs. 2-4) is very thick and solid looking, and the folds, which converge towards the œsophageal aperture, are well marked. Those on the right side have their œsophageal ends attached to the dorsal continuation of the endostyle (Pl. IV. fig. 4), while those on the left side join the posterior extremity of the dorsal lamina.

There are only six to ten large transverse vessels and they run obliquely, converging towards the short dorsal lamina (Pl. IV. fig. 2, *tr.*). The infundibula (Pl. IV. fig. 3) are numerous, irregular, and shallow, and the stigmata vary greatly in length.

The endostyle is conspicuous and is very long, being continued round the posterior end of the branchial sac and up the dorsal edge as far as the œsophageal aperture.