

The spicules in the test are much more numerous in the upper layer than in the deeper parts, and they are most abundant between the anterior ends of the bodies of the Ascidiozooids. Consequently in surface view under a low power the Ascidiozooids show through as closely placed elliptical areas of a lighter colour separated by bands of opaque test densely crowded with spicules. The edges of the lobes around the branchial apertures are strengthened with a line of spicules, and there is generally a little group which forms a thickening at the apex of each lobe.

The branchial sac is wide, but not long. The stigmata are particularly large and well developed (Pl. XXXVIII. fig. 8, *sg.*). The transverse vessels vary somewhat in calibre, but they are never very large. In some places they are exceedingly narrow, and the pointed ends of the stigmata in adjacent rows almost meet (Pl. XXXVIII. fig. 8, *tr.*). The ciliated cells are rather small; their free ends do not project.

The endostyle, though conspicuous, is not so wide as usual (Pl. XXXVIII. fig. 9, *en.*), and has not the undulating course so common in Compound Ascidians. The dorsal languets are narrow. The tentacles are very delicate, but the larger ones are rather long (Pl. XXXVIII. fig. 9, *tn.*). There are usually eight long and eight short. The nerve ganglion is ellipsoidal in form. The aperture of the dorsal tubercle is circular (Pl. XXXVIII. fig. 7, *d.t.*). It opens just posterior to the peripharyngeal band, and leads at once into a short wide infundibulum.

The oesophagus runs posteriorly from the branchial sac to open into the globular smooth-walled stomach. The intestine is long and forms a wide loop. It presents a small dilatation on its course just at its most posterior part.

*Leptoclinum tenue*, n. sp. (Pl. XXXIX. figs. 8-11, and Pl. XL. figs. 3-5).

*The Colony* is a small, more or less rounded, incrusting patch. It is thin, and is attached by the entire extent. The upper surface is fairly smooth. The colour is pure white.

The length is about 1.5 cm. and the breadth about 1 cm.; the thickness is very slight, 0.25 to 0.75 mm.

*The Ascidiozooids* are large and fairly numerous. They are closely and regularly placed all over the surface of the colony. Common cloacal apertures are not visible. The bodies of the Ascidiozooids are very short.

*The Test* is moderately firm, but tears easily. It is of an opaque white colour throughout. The structureless matrix contains minute rounded test cells and numerous calcareous spicules. There are no bladder cells. The spicules are mostly stellate and regular, but a few are nearly spherical or of irregular form.

*The Mantle* is rather muscular.

*The Branchial Sac* is small.