

large numbers of bladder cells (Pl. XLII. fig. 3, *bl.*). In many places the bladder cells are polygonal from mutual pressure.

The test cells are of two distinct kinds : (1) the large granular cells, which are very conspicuous—these are mostly of spherical or ellipsoidal shapes, but occasionally become elongated ; and (2) the ordinary small test cells, which are of fusiform, stellate, or branched shapes—these are not numerous, and are inconspicuous on account of their small size and clear protoplasm. Vascular ectodermal appendages are found here and there in the test. They have short wide terminal bulbs.

The thorax and abdomen of the Ascidiozooids are of nearly equal size, and they are not separated by a marked constriction as in the case of *Diplosomoides molle*. Some parts of the mantle are slightly pigmented, and of a brownish colour. The branchial siphon is very short, and the aperture is not lobed. The sphincter is, however, distinct. The muscle bands of the mantle are very delicate ; they run in various directions. Two bands run along the dorsal edge of the thorax.

The branchial sac is longer antero-posteriorly than dorso-ventrally. The stigmata are regularly arranged, and their ciliated cells are distinct (Pl. XLII. fig. 4, *sg.*). The muscle bands in the transverse vessels are not strong, and there are no fibres present in the longitudinal interstigmatic vessels (Pl. XLII. fig. 4).

The endostyle is conspicuous ; its course is straight. The dorsal languets are long and narrow. The tentacles are long ; they vary a little in number, but are always of two sizes, and are arranged regularly. The nerve ganglion and neural gland form an ovate opaque mass placed not far from the branchial aperture.

The œsophagus leads backwards for a short distance from the branchial sac to the large globular smooth-walled stomach (Pl. XLII. fig. 2). The intestine curves round ventrally from the posterior end of the stomach in a wide open loop, and then crosses over to the dorsal side so as to reach the branchial sac close to the œsophagus. The intestine throughout the greater part of its length contains a series of round fæcal pellets of a brown colour (Pl. XLII. fig. 2). The stomach is also sometimes of a brown colour from the contained food matters.

The reproductive organs were not well developed in any of the Ascidiozooids examined.