

when the test was removed. The endostyle is conspicuous. Its ends are bent abruptly in a dorsal direction (Pl. XV. fig. 7, *en.*).

The alimentary canal is large and conspicuous (Pl. XV. fig. 7). The œsophagus commences at the dorsal edge of the posterior end. It is a short and wide tube, and leads directly backwards to the large globular stomach, which is opaque and thick walled but perfectly smooth, having no ridges or folds. From the dorsal edge of the stomach, near its posterior end, there projects a small pyriform body (Pl. XV. fig. 7, *ap.*). This is seen, when more highly magnified (Pl. XV. fig. 8), to be a short knob-like vascular appendage from the mantle over the stomach, or just where the stomach joins the intestine. It is thin walled, but always contains a number of large pigmented blood-corpuscles of a red colour. The blood-corpuscles all over the body are of a reddish colour, and thus give the Ascidiozoid and the whole colony the characteristic red tint, but the corpuscles in this vascular appendage always seem larger and redder than elsewhere. What the use of this structure is I am unable to say. The intestine springs from the posterior end of the globular stomach and turns at once ventrally and then forwards in a curve which gives the posterior end of the body its rounded shape (Pl. XV. fig. 7). The rectum crosses the œsophagus to gain the dorsal side of the peribranchial cavity. The intestine is wide throughout its whole course.

The reproductive organs lie alongside the intestine, and project on the one hand into the intestinal loop and on the other beyond the intestine ventrally (Pl. XV. fig. 7, *ov.*). They are hermaphrodite in the mature Ascidiozooids, consisting of one or two large ova and a number of spermatic vesicles. Many embryos in various stages of development, and some tailed larvæ, were found in the common test, but no incubatory pouches were observed.

Figure 12 shows one of the most advanced larvæ which were found in the colony. The shape of the body is elongated, rounded at both ends, and widest in the middle. The tail is still present, but the branchial sac is well developed, three or four rows of stigmata being visible. At its front end the larva is provided with two large adhering papillæ. The endostyle is conspicuous and is directed transversely to the longitudinal axis, the future mouth being placed in the middle of the dorsal surface of the larva. The pigmented eye is conspicuous behind the mouth at the one end of the dorsal edge of the branchial sac, while the urostyle begins at the other end close to the œsophageal aperture. The œsophagus bends ventrally to open into the stomach, which lies directly behind the branchial sac. The intestine first runs ventrally, then turns posteriorly, and then curves round dorsally and a little anteriorly, and disappears behind the stomach. The test is well developed all over, and contains a large number of bladder cells.

Figure 13 represents part of another far advanced larva more highly magnified. The endostyle (*en.*) is a conspicuous curved body bounding the branchial sac ventrally. The branchial sac is well developed, and shows four rows of stigmata. At its anterior