The branchial sac is thin-walled and readily torn. The stigmata are large with narrow ends (Pl. XIV. figs. 8, 11, *sg.*). There are at least four rows on each side of the sac.

The endostyle is fairly straight. It is conspicuous. The languets are very short, and they are not united by a membrane in the middle dorsal line (see Pl. XIV. fig. 11, *l*); the stigmata pass in a continuous series from the one side of the branchial sac to the other across the dorsal edge.

The tentacles are remarkably short. They are merely small triangular stumps and seem to be in quite a rudimentary condition. They form a marked contrast with the well-developed tentacles of other members of the genus, such as *Colella pedunculata*.

The nerve ganglion and neural gland form an ellipsoidal mass, with an anterior prolongation, the neural duct, which opens just inside the prebranchial zone by a simple aperture, the dorsal tubercle.

The alimentary canal is large and conspicuous. In the young Ascidiozooids, of which there are a great many in the colony, it is much elongated antero-posteriorly (see Pl. XIV. fig. 12). The œsophagus in the figure is rather larger than in most of the other specimens examined, but it is always of considerable length. The stomach is oval in shape, and along with the œsophagus runs directly backwards, forming the dorsal part of the visceral mass. After the stomach comes a short and very narrow piece of intestine which usually has a small posteriorly directed cæcal process (Pl. XIV. figs. 12, 13). This forms the termination of the visceral mass. Figure 13 shows the shape of this region of the canal in another specimen. The intestine then enlarges (Pl. XIV. fig. 13, *i.*), and turning anteriorly runs forward to cross the œsophagus, and thus enters the dorsal part of the peribranchial cavity. The ventral part of the visceral mass is formed by the long intestine. In the older Ascidiozooids the alimentary canal is not so much elongated as in the younger ones, the stomach is more globular, and the intestine is relatively shorter and wider. The vascular appendage arises rather on the ventral edge of the posterior end of the abdomen (Pl. XIV. fig. 12, *v.ap.*).

In the intestinal loop, and just alongside the stomach, a number of small ova, forming a compact mass, are always found in the young Ascidiozooids (Pl. XIV. fig. 12). In older ones one or two large mature ova are generally still present, but in addition there are always some ovate opaque seminal vesicles and a vas deferens. In most of the mature Ascidiozooids the dorsal part of the peribranchial cavity is prolonged into an incubatory pouch of considerable size (Pl. XIV. fig. 10). It is usually sac-shaped, with a very narrow mouth, and was never observed to be spirally coiled. These incubatory pouches are filled with embryos in various stages of development, and a large number of tailed larvæ are also present. In the larvæ (Pl. XIV. fig. 14) the body is narrow and elongated, and the tail is very long, being in some cases capable of being wound nearly twice around the body. A very broad delicate membrane fringes the tail upon each