

end the young tentacles are seen, and in front of them *br.si.* points to the ectoderm in the region of the future branchial siphon. This indicates the anterior end of the Ascidian and the middle of the dorsal surface of the larva. Outside the ectoderm (*br.si.*), the test (*t.*) with its numerous large bladder cells is seen. A single sense organ is present, and is still large and well developed (*ot.*). Around it and between it and the tentacles are some masses of cells (*c.m.*), which are probably nervous. Behind the sense organ (nearer to the posterior end of the larva) is a distinct opening (*ap.*) through both test and ectoderm. The character of the ectodermal cells changes greatly at this point. Over the sense organ they are almost squamous, but as they approach the opening they become gradually cubical and then low columnar in form; finally, where they turn inwards to line the short tube leading from the aperture (see Pl. XV. fig. 13, *ap.*), they become tall, narrow, columnar cells. On the other side of the opening the same changes are seen, the flattened ectoderm cells of the posterior end of the larva becoming first cubical and then columnar. Probably this invagination of the ectoderm at the dorsal edge of the anterior end of the Ascidian is the origin of the atrial aperture. Further back, along the dorsal edge of the branchial sac, is seen the base of the urostyle (*u*), which is continued out into the tail, while still further back is found the œsophagus (*œ.*) leading into the globular thick-walled stomach (*st.*). This larva is very remarkable on account of the advanced state of its organisation while still in a completely larval condition. The branchial sac, the endostyle, and the alimentary canal are well developed, while the urostyle, the pigmented sense organ, and the larval adhering papillæ are still present.

*Colella elongata*, n. sp. (Pl. XVI. figs. 1-7).

*The Colony* is elongated and rudely conical. It is not flattened, and is probably attached by a stalk springing from the posterior wider end. The upper free end is narrow, but rounded. The surface is rather uneven, but fairly smooth. No common cloacal apertures are visible. The colour is a dull yellowish-grey, darker towards the lower and lighter towards the upper end.

The length is 3 cm., the greatest breadth is 1 cm., and the thickness about 1 cm.

*The Ascidioids* are elongated antero-posteriorly, and placed at right angles to the surface. They are usually about 1.5 mm. in length and 1 mm. in breadth. The anterior end is broad, and bears both the apertures. The posterior is narrower, and is continued into the long narrow vascular appendage, which, turning downwards, traverses the common test to the base of the colony.

*The Test* is soft. Its outer layer is smooth and firmer than the deeper parts, which are very soft and spongy. It is not very transparent, and has a greyish colour. In sections