

fig. 1). The common cloacal apertures are circular, and vary from 1 mm. to 2 mm. in diameter. There are usually about eight Ascidiozooids in a system. On the upper surface of the colony the wide anterior ends of the Ascidiozooids are distinctly visible. They show the branchial aperture with its six lobes and the anterior extremity of the endostyle. On the sides of the colony the abdominal and post-abdominal regions are seen (Pl. XXVI. fig. 1). In a body 12 mm. long the thorax is about 4 mm. in length, the abdomen 3 mm., and the post-abdomen 5 mm. In some cases the post-abdomen is relatively much longer. It extends down to the top of the peduncle.

The test in the upper part of the colony is small in amount, as the Ascidiozooids are very closely placed (Pl. XXVI. fig. 1). The outer surface is firmer than the inner part, and can be torn off as a distinct membrane. The ectoderm adheres very firmly to the test, and consequently it is sometimes a little difficult to separate the thoracic part of the Ascidiozooid from the test, and patches of the ectoderm and even small pieces of the mantle are occasionally left adhering to the test. The mantle is unusually delicate, and recalls that of some species of *Colella* in the Distomidæ. The branchial aperture is distinctly six-lobed, but the sphincter is feebly developed (Pl. XXVI. fig. 4, *br.*).

The branchial sac is usually about 4 mm. in length and 1.5 mm. in breadth. The number of transverse vessels is usually over twelve, and the stigmata are always well developed. There is a considerable amount of variability, however, in the size of the transverse vessels and the length of the stigmata. The characters appear to be constant throughout the same sac, but differ in the Ascidiozooids of one colony. Figures 2 and 3 on Plate XXVI. show two extreme conditions. In figure 3 the transverse vessels are as wide as the length of the stigmata, while in figure 2 they are much narrower and the stigmata are larger. Each transverse vessel has a bundle of muscle fibres running along it (Pl. XXVI. fig. 2, *m.f.*). The ciliated cells bounding the stigmata are always large and distinct.

The dorsal languets are triangular, rather short, and flattened antero-posteriorly (Pl. XXVI. fig. 3, *l.*). On account of the transparency of the mantle and branchial sac the endostyle is always a conspicuous object in dissections. It is unusually narrow, and does not undulate from side to side.

The œsophagus (see Pl. XXVI. fig. 4, *œ*) is long, narrow, funnel-shaped, and curved with the convexity dorsal. It leaves the branchial sac at the dorsal edge of the posterior end. The stomach is large and ovate in shape, and its long axis is directed posteriorly and ventrally (Pl. XXVI. fig. 4, *st.*). The œsophagus joins it by a small circular aperture on its inner or dorsal edge about the junction of the anterior and middle thirds. The wall of the stomach is not folded or thickened in any part. The intestine leaves the posterior end of the stomach and curves posteriorly and dorsally, narrowing until it reaches its most posterior point (Pl. XXVI. fig. 4, *i.*), where it enlarges to form a spindle-