groups, cause the irregular appearance of darker red spots in the axial portion. Throughout all parts of the peduncle (Pl. XV. fig. 11) the ordinary minute test cells are found in the otherwise homogeneous matrix. A few thin-walled vessels (Pl. XV. fig. 11, *v.ap.*) are also to be seen in both transverse and longitudinal sections. They traverse the peduncle in its length (Pl. XV. fig. 9, *v. ap.*), and seem to give off no lateral branches.

The Ascidiozooids are decidedly small (Pl. XV. fig. 7). The visceral mass is a little larger than the branchial part of the body. The vascular appendage is delicate, and springs from the middle of the posterior end of the body. It is clearly divided into two tubes running side by side. The anterior end of the Ascidiozooid is not large. It bears the short wide branchial siphon. The dorsal edge of the branchial part of the body is more convex than the ventral.

The test in the head is very soft. As the Ascidiozooids and embryos are very numerous, the test is greatly broken up. There is no large central part of the colony formed of test alone. Bladder cells are abundant, but they are nearly always spherical, not being so numerous as to be compressed into polygonal forms. The ordinary small cells of the test are abundant and of all shapes. The vascular appendages, which are found every here and there in the test, are thin and delicate. They are usually filled with blood-corpuscles.

The musculature of the mantle is very fine. In addition to the regular transverse bands there are some bundles of fibres crossing the others irregularly. There is a good deal of white pigmentation in the mantle. In addition to the patch at the anterior extremity of the endostyle there are sometimes clumps of cells scattered over the branchial region, and almost invariably there are large areas of the stomach (Pl. XV. fig. 7, *st.*) and intestine which have a granular opaque white appearance from the presence of numerous pigment cells.

The branchial sac is nearly as broad as it is long. There are usually four or five rows of stigmata on each side. The transverse vessels (Pl. XV. fig. 3, *tr.*) are moderately wide; they have delicate horizontal membranes attached to their inner edges. The sac shown in figure 5 was probably not from a mature Ascidiozooid. The stigmata are relatively short and rounded, and all the parts are small. Figure 3 shows the shape of the stigmata in a fully developed condition. The stigmatic cells are very conspicuous under a high power. They are short, and their free ends project usually in a somewhat triangular form (see Pl. XV. fig. 4). The cilia are abundant.

The dorsal languets are rather blunt at their ends. They have more of a triangular form when seen from above or below than from the side as in figure 5. A strongish band of muscle fibres may be traced along the dorsal line of the branchial sac outside the base of the languets (Pl. XV. fig. 5, *d.l.*). The tentacles are long and thin. In several of the Ascidiozooids they were found projecting through the mouth of the branchial siphon