

The Ascidiozooids are numerous and closely placed. They form little rounded projections all over the surface of the head, but probably were not so prominent when in a living condition. The orange marks present in some places are caused by the alimentary viscera showing through; usually they are not visible. In most of the Ascidiozooids the branchial aperture can be made out as a small light-coloured dot. The rest of the body of the Ascidiozooid is dark green. It lies obliquely in the test, its posterior end pointing downwards to the base of the colony as well as sloping inwards a little towards the centre of the head. The viscera are placed close behind the branchial sac, so there is not much antero-posterior elongation in the body. Most of the branchial part shows at the surface, and varies in length from 1 mm. to 2 mm. Some young Ascidiozooids of small size are present in the colony.

The test is remarkable on account of its very limited amount, its toughness, its comparative want of cell elements, and its well developed system of blood-vessels (Pl. XVIII. fig. 8). Between the Ascidiozooids there is merely a thin layer of test, and there is not much more present in the centre of the head. This is probably due to a great extent to the shrunken condition of the colony. Most of the heads are flattened laterally, but I am of opinion that this is not the natural shape, but is due to distortion during the process of preservation. Possibly the strength and firmness of the test is also unnatural. The matrix is apparently structureless, and contains very few cells. The blood-vessels are numerous and large. They branch freely (Pl. XVIII. figs. 8, 9) and have swollen terminations. In some places near the surface they are found to form by branching and anastomosing systems of small meshes, from which are given off numbers of swollen bulbs on the side next the surface (Pl. XVIII. fig. 9). Nearly all the vessels contain large quantities of blood-corpuscles, most of which are of a green colour. The terminal knobs are, as a general rule, not greatly swollen (Pl. XVIII. fig. 8, *t.k.*), being more of a club-shape than the ovate form found in many other Ascidians.

The mantle has a peculiar form of musculature. The bands are thin, and in some places very delicate, but they are exceedingly numerous, and form a close reticulation. On both siphons the sphincters are very strong, and numbers of muscle bands radiate from under them over the neighbouring parts of the mantle, forming with the other irregularly running bundles of fibres a very close network. There is a good deal of pigmentation in the mantle, the lacunæ being in many places filled with dark green blood-corpuscles.

The branchial sac is large and well developed. It is very like the sac of some of the Botryllidæ, and it has internal longitudinal bars. These are rather broad but very thin membranes, which are not placed at regular distances, and apparently vary in number. In a very young sac (Pl. XVIII. fig. 12) three bars (the usual number in the Botryllidæ) were found upon one side, but in some of the adult branchial sacs (Pl. XVIII. fig. 10) only two bars were present upon each side.

The meshes are irregular in size and shape, on an average each contains about four