

elliptical in outline, and have the Ascidiozooids arranged in a circle around them (Pl. XXV. fig. 1), consequently the systems resemble those of the genus *Botryllus* in outline. Parasitic Crustaceans were found in some of the cloacal cavities. The anterior ends of the Ascidiozooids are seen on the upper surface of the colony as small round spots, and the bodies are visible on the sides of the colony in the form of pale yellow streaks. In sections the Ascidiozooids are seen to be equally numerous in all parts of the colony.

The test is very tough and solid, and is of the same colour and consistence throughout. In some places the matrix is delicately fibrillated. The test cells are more abundant in the outer layer than elsewhere; they are mostly fusiform, and are arranged with their long axis parallel to the surface. They are nearly all granular and opaque, while the surrounding matrix is clear and transparent.

The longitudinal muscle bands in the mantle are very regular, but narrow; on the post-abdomen they are less regular; they are broader, but placed further apart, on the thorax; and are almost absent on the abdomen. The branchial aperture is six-lobed. The branchial siphon is long and narrow, and the sphincter is well developed. In some parts of the thorax the muscle bands are rather irregular in their arrangement and anastomose with one another.

There are about twelve rows of stigmata in the branchial sac. The transverse vessels are strong, and are provided with double muscle bands (Pl. XXV. fig. 2, *m.f.*). The anterior band of one vessel is connected at the dorsal and ventral edges with the posterior band of the vessel in front, and the posterior band of the first vessel is connected at the edges with the anterior band of the vessel behind, so that a continuous band of muscle fibres encircles each row of stigmata (see Pl. XXV. fig. 2). The effect of the contraction of these muscles of the branchial sac would probably be to corrugate the stigmata and interstigmatic vessels and so diminish the size of the sac as a whole. Probably this action takes place when the mantle contracts and water is forced out through the branchial and atrial apertures simultaneously. The stigmata are usually equal in breadth to the fine longitudinal vessels. The ciliated cells are large and distinct.

The dorsal languets are large and of an elongated triangular form. They are numerous and closely placed. The endostyle is large and conspicuous. The tentacles are of two sizes placed alternately; they are large. The nerve ganglion is ellipsoidal in shape and of large size.

The œsophagus is of moderate length and runs directly backwards to open into the large ellipsoidal stomach (Pl. XXV. fig. 3). The wall of the stomach is folded so as to form a number of detached knobs with thickened epithelium projecting from the surface. This structure recalls the condition of the stomach in *Morchellioides affinis*, but in the present case the knobs or cæca are more numerous and are less distinctly placed in rows (Pl. XXV. fig. 3, *st.*). In a transverse section of the stomach