

bright yellow, the cloacal apertures are whitish, and the surrounding area is grey, while the small intervals left here and there between the systems are of a bluish-grey tint.

The systems are very numerous, and are so closely placed over the whole colony that very little of the test is visible, and here and there it becomes a little difficult to determine where the different systems end. The systems are all nearly circular in form, and contain from eight to fourteen Ascidiozooids each; the general numbers are nine, ten, and eleven (see Pl. IV. fig. 1).

The part of the Ascidiozooid seen from the surface is of ovate form, with the narrower end pointing towards the common atrial aperture or centre of the system. It is on an average about 1.5 mm. long and 1 mm. broad, but in some places longer Ascidiozooids occur, measuring up to 2.5 mm. in length.

Under a low power of the microscope the branchial apertures, which are just visible to the unaided eye, are seen to be bounded by a rather wide opaque white band, the sphincter muscle, while a much narrower white line, the peripharyngeal band, is in most cases visible further out (compare Pl. IV. fig. 2). The anterior part of the endostyle and the nerve ganglion are also usually visible; no vessels are seen in this surface view. The common cloacal apertures are very clearly visible to the naked eye, all over the colony. They are all more or less widely open, and are bounded by distinct thickened whitish rims. They are circular or elliptical in shape, and vary in size from 0.5 mm. to 2 mm. in diameter (Pl. IV. fig. 1).

A section through the colony shows the great thickness of the test. The Ascidiozooids occupy merely a thin layer, of a yellowish colour, extending from 1 mm. to 1.5 mm. inwards from the surface; the rest of the thickness of the colony is formed of the soft grey semi-transparent test. At the lower end of the colony, near the point where the incrustated Zoophyte was attached, there is a small tapering portion of test free from Ascidiozooids. This is the only place where the terminal knobs of the vessels are visible in surface view. They are fairly numerous, but being small and of an opaque grey tint, they are by no means conspicuous. In the superficial layer of test over the colony generally, vessels are present, but they are small and their terminal knobs are of small size. This rather feeble development of vessels in the test of this species seems to be due simply to want of room in the superficial part owing to the large number of Ascidiozooids.

The mantle musculature is irregular and of fair strength. The atrial siphon is prolonged into a tube of considerable length and having a rounded termination (Pl. IV. fig. 3 *at.*). Its walls, which are simply a continuation of the mantle, are provided with both longitudinal and transverse muscle bands. The latter are more abundant and stronger than the former. The branchial aperture is very small, and the sphincter is fairly strong (Pl. IV. fig. 2, *sph.*).

The branchial sac seems stronger than is usual in the genus *Botrylloides*. In one sac examined there were ten rows of stigmata, but in some of the others there are probably