

equilateral triangle in side view. The dorsal end is the widest part, and has five or six lobes upon each side. From the grooves between these lobes the channels, corresponding to the ridges on the inner surface, converge towards the narrow intestinal end. On the anterior surface of the stomach, about two-thirds of the way from the œsophagus to the intestine, there is a large ovate thick-walled cæcum (Pl. III. fig. 21, *cæ.*) into which the duct of a gland placed on the walls of the intestine opens. Beyond this cæcum the stomach tapers into the intestine, which turns anteriorly and dorsally, then a little posteriorly towards the œsophagus, and then finally curves sharply forward to become the short rectum. At its commencement the intestine is narrow, in its forward curve it widens, and then in its second or rectal bend it narrows again, and the rectum is the narrowest part of the alimentary canal (Pl. III. fig. 21).

The intestinal gland is composed of a number of clear tubules, which form a network over the last portion of the intestine. The duct springs from the posterior side of that region, and runs ventrally and posteriorly to open by a dilated end into the cæcum on the anterior wall of the stomach (see Pl. III. fig. 21). This system is the same as the so-called liver of many Tunicata, and the system in *Perophora* and *Salpa*, discussed by Chandelon,¹ and the refringent tubules described by Giard² in many Compound Ascidiæ, and the more posterior of the two glandular systems which I have figured in *Doliolum*.³

Many tailed larvæ occur in some parts of the colony. They have rounded or elliptical bodies about 0.42 mm. antero-posteriorly, and the tail measures about 0.8 mm. in length. In these larvæ there is only a single pigmented sense-organ present.

Botrylloides fulgurale, n. sp. (Pl. III. figs. 1-8).

The Colony is a large regular spreading mass of considerable thickness. The surface is uneven but smooth. The colour varies from buff to light brown, and has in places a slight pinkish tint. The anterior ends of the Ascidiozooids form lighter areas, and the edges of the colony are light grey. The common cloacal apertures are inconspicuous.

The extreme length of the colony is about 8.5 cm., the greatest breadth 4.5 cm., and the average thickness about 4 mm.

The Ascidiozooids are elongated antero-posteriorly, and are about 3 mm. in length and very nearly 1 mm. in greatest breadth. The light coloured area visible on the surface of the colony is rather less than 1 mm. in its greatest diameter.

The Test is rather hard, firm, and tough. It does not become excessively thickened in any part. There is very little expanded edge, the margins of the colony being comparatively thick and rounded, and of a greyish colour. The terminal knobs of the

¹ Sur une annexe, &c., *Bulletin de l'Acad. Roy. de Belgique*, t. xxxix., No. 6, 1875.

² Recherches sur les Synascidies, *Arch. de Zool. expér.*, t. i. p. 536.

³ Report upon the Tunicata collected during the Cruise of H.M.S. "Triton," *Trans. Roy. Soc. Edin.*, vol. xxxii. pt. i. p. 93.