

branchial siphon and prebranchial zone (there are no tentacles to form the usual boundary between those two regions) by the peripharyngeal bands, and tapers slightly to the rounded posterior end, which is placed between the fifth and sixth muscle bands. The stigmata are arranged in two series on each side of the sac. The dorsal series commences at the third muscle band and extends posteriorly to the end of the sac; while the ventral series runs from the fourth band anteriorly to beyond the fifth posteriorly, where it joins the corresponding series of the other side.

The endostyle is straight. It extends from between the second and third to between the fourth and fifth muscle bands (Fig. 6, *end.*). There are no dorsal languets.

The nervous system consists of a single ganglion placed in the mantle in the mid-dorsal line between the third and fourth muscle bands. It gives off distributory nerves anteriorly and posteriorly. The sense organs consist of some groups of modified epithelial cells in which nerves end, placed upon the branchial and atrial lobes. In the Blastozoid, however, there is in addition an otocyst placed on the left side of the body between the third and fourth muscle bands, and the ganglion lies between the fourth and fifth muscle bands.

On the ventral surface of the ganglion is found the usual subneural gland, with a delicate duct which runs forward to open into the prebranchial zone in the mid-dorsal line by means of a funnel-shaped cavity richly ciliated internally (Fig. 6, *d.t.*). The rounded opening of this ciliated funnel is surrounded by the spirally-coiled dorsal ends of the peripharyngeal bands.

The peribranchial cavity is a large space lying posteriorly to the branchial sac, and opening externally by the terminal atrial aperture. It has an anterior lateral extension on each side of the branchial sac into which the stigmata open.

The alimentary canal is curved so as to form a V-shaped loop, concave dorsally, placed at the posterior end of the branchial sac, and occupying the ventral part of the peribranchial cavity. The œsophagus is a short wide tube running backwards to open into the rounded stomach. The intestine springs from the posterior end of the stomach, and runs at first posteriorly and then dorsally to open into the peribranchial cavity near its middle. A system of digestive tubules ramifies over the greater part of the wall of the intestine, and opens by a duct into the stomach.

The heart is placed ventrally, close to the œsophageal aperture. The hermaphrodite reproductive organs lie ventrally, and open into the peribranchial cavity close to the anus. The ovary is a small rounded sac, but the testis is a greatly elongated tube (see Fig. 6, *tes.*), which varies in its extent and shape in different individuals of the same species.<sup>1</sup> When fully developed it may extend anteriorly as far as the first muscle band. It lies at the left side of the body.

In Uljanin's recent monograph on the genus *Doliolum* only four species are recognised:—

<sup>1</sup> See *Trans. Roy. Soc. Edin.*, vol. xxxii. part i. pl. xx. figs. 6-11, 1888.