

prominent lens, but whether the latter is a solid body, a cuticular formation, or only fluid in the centre of the mass, is not explained. Mr. Harmer bases one of his arguments for the interpretation he has given of the "dorsal organ" (brain) on the constant relation to each other of ganglion-cells, a fibrous layer and the eyes, and he seems to have facts in his favour.

In *Rhabdopleura* a ciliated tubercle (considered by Lankester and others to be a sense-organ) was discovered by Sars on the dorsal surface at the base of each arm of the lophophore. In *Loxosoma* Vogt¹ also describes a tactile papilla on each side near the arms, and Salensky² traced nerves from the ganglion to these posterior sense-organs in *Loxosoma crassicauda*. No such organs, however, can be observed in the preparations of *Cephalodiscus*, though it is possible the search in the living animal may be more successful. The oral folds of glandular tissue and the parts connected with the gill-fissures are probably highly sensitive and ciliated, but no other sense-organs could be observed.

Reproductive Organs.

No differentiation was noticed in regard to the sexes, and no dimorphism of the zoids, as in Professor Ehler's remarkable burrowing form (*Hypophorella expansa*³). Nothing is more striking, however, than the profusion of buds and the abundance of ova, apparently one of the chief ends of the species being propagation. The chambers of the cœnœcium present many of the large ova, and they are occasionally found amongst the plumes, as in *Phoronis*, with its swarms of minute eggs; but such in the former is probably accidental. Almost every adult again bears one or more buds attached near the tip of the pedicle.

Ovary.—In most specimens a pair of large ova are observed projecting anteriorly (Pl. III. fig. 2, *ov*), so that their pure white colour is recognised through the attenuated integument above and behind the eye-like oviducts, which, as it were, mark the anterior boundary of the ovary. In section it is found that a septum passes from the median wall of the rectum to the opposite wall of the body, thus dividing the body-cavity in that region into two spaces, in which are the ova supported on a pair of lateral mesenteries. As soon as the glandular tissue forming the dorsal wall of the buccal cavity appears, the mesenterial septum just indicated is attached to its basement-layer externally, and also more or less in the median line. The septum disappears on the approach of the stomach, or about the posterior termination of the great buccal disk, and any product remaining towards the end of the latter is generally pushed to one side. As a

¹ Sur les *Loxosoma* des Phascolosomes (sep. copy), p. 8, pl. xii. fig. 1.

² *Ann. d. Sci. Nat. (Zool.)*, sér. 6, t. v. p. 12 (art. 3), pl. xii. figs. 2, 3.

³ *Abhandl. d. k. Gesellsch. d. wiss. Göttingen*, 1876.