a. Description and Comparison of Cypris-Larvæ.

At first I experienced great difficulties in identifying the parts of the body of the complemental male; however, I believe I have solved the problem by comparing the full-grown male with a younger stage of its development, and the latter with the corresponding stage of an ordinary species of *Lepas*. The occurrence of a Cypris-larva between the two complemental males at the ordinary place enabled me to make this comparison; from its structure as well as from the place whence it was taken there can be no doubt, I believe, that this latter creature was destined to develop (retrogressively of course) into a complemental male.

The species of *Lepas*, the Cypris-larvæ of which have served me for comparison, was the *Lepas australis*, Darwin. It is not only very characteristic on account of its great size, but it is also the best known Cypris-larva, as it served first for the investigations of Darwin, and again some years ago for the studies of Claus. The latter has given a very good figure of the internal structure of this larva as seen in a sagittal section. My figs. 1 and 2 on Pl. II. very closely correspond to that of Claus. My fig. 1 was drawn from a preparation made by dividing the body of the Cypris-larva of *Lepas australis* into two nearly equal halves by means of a sagittal section. The rounded spot (*A M*) is the adductor muscle of the two valves of the Cypris-larva; the straight line at the under side of the valve represents the ventral side, the convex one the dorsal side; the extremity on the left of my figure the frontal (cephalic), the one facing it the hinder (abdominal) extremity of the body; from the way in which the spines of the legs are stretched out at the ventral side it is clear that there is a slit-like opening between the adductor muscle and the hinder extremity of the body. In fig. 2 of Pl. I., representing a longitudinal section parallel to and at a little distance from the ventral margin, this orifice is also distinct. This is the only place where the interior of the sack or mantle (as Darwin calls it) is in open communication with the surrounding water.

The body of the future *Lepas* is enclosed within the sack and has also a wall of its own; on one side (the right hand side of the figure) this wall is very distinct, and it passes over near the middle of the dorsal margin into a transverse invagination which almost reaches up to the ventral side. It is by this invagination that the division of the body into a capitulum and a peduncle is brought about; what in fig. 1 of Pl. II. is placed on the right hand side of the invagination (*Inv.*) is the capitulum, what is placed on the left hand side the peduncle. As the invagination of the dorsal wall does not reach as far as the ventral side, a direct communication remains between the capitulum and the peduncle. Through this commissure, which is very narrow in the full-grown animal, pass the oviducts and the nerves destined for the peduncle.

On the ventral side an invagination is seen at a distance of about one-fourth of the total length from the peduncular extremity; at the bottom of this invagination, when