Sylon hippolytes, M. Sars, is 10 mm. in length and 7 in breadth; *Sylon schneideri* had a very different size in the specimens I was able to investigate; in one the dimensions were about 3·1 by 2·1 mm., in another the length and the greatest breadth measured 6 and 4·1 mm. respectively. I have also seen a specimen of *Hippolyte pusiola* with *two* small specimens of *Sylon schneideri* attached to it; the one about 1·5, and the other 2 mm. in length.

The specimen of *Sylon challengeri* which was sent me was not quite uninjured. As is shown in figs. 1 and 3, Pl. CXLIX., the outer wall of the body was torn open in front, and this damage, caused perhaps by the desire of the artist to see as much as possible of the animal without detaching it from the *Spirontocaris*, at first caused some difficulty in the determination of the animal. In *Sylon* the outer surface of the body is quite smooth and bears no appendages or trace of segmentation; the large and very distinct opening found in the other *Rhizocephala*, which Delage calls the cloaca, is wanting in this genus. For the communication of the mantle-cavity with the exterior two rather small round holes alone are present, which were accurately observed and figured by M. Sars. From analogy I am of opinion that they were situated just within the limits of the damaged part of the body of *Sylon challengeri*; and a comparison with the figure of *Sylon schneideri* attached to *Hippolyte pusiola* (Pl. CXLIX. figs. 4, 5) will readily convince any one of the probability of this supposition. In fig. 5 a lateral view is given, and in fig. 4 a front view; in both figures the circular openings exist at *a*., and they are about 0·3 mm. in diameter. In young specimens these openings seem to be closed; at all events I observed them in this condition in a small specimen of *Sylon schneideri*, a transverse section of which is represented on Pl. CL. fig. 2. Like other Rhizocephala, *Sylon* carries its developing ova within the mantle-cavity; Kröyer's observations on the larvæ of this genus, and his comparison of these larvæ with those of *Sacculina*, admitting, I think, of no doubt on this point. Most probably the Nauplii, when ripe, leave the cavity by means of the above-mentioned openings. Running from between the two openings towards the place of attachment, a narrow stripe is visible through the transparent outer wall on both sides, limited by a distinct clear line (Pl. CXLIX. fig. 4). Here the body of the *Sylon* seems to be attached to the interior of the mantle, and probably this stripe is comparable to the "mésentère" of Delage.

When I commenced my investigations I did not know the nature of the parasite, and I therefore decided upon studying it by means of transverse sections. I was obliged to detach it from its rather bulky host, taking away along with the parasite an annular part of the body of the Shrimp. Fig. 2, Pl. CXLIX. was made after the animal had been thus loosened, and represents it from below. The round smooth part (*e*) afterwards proved to be the very dense mass of ovarian tubes. The outer covering was so loosely connected with the interior, that I was obliged before embedding it in paraffin to take it quite away; and in so doing I neglected to investigate microscopically the mode in which