

blood-space (archicœlome) surrounding it, I did not succeed in demonstrating one. Considering that I had found such openings in *Carinoma*, and that Oudemans had afterwards demonstrated them in *Carinella*, I expected they would also be present in *Carinina*. For the present, however, the result of a very attentive search is that they are absent; at least no opening is visible which can be said to prove a similar communication beyond all doubt and by which it might be demonstrated once for all. Questionable points of communication, which might eventually be interpreted as such, I have not allowed to influence my testimony, so that, for the present, I must answer the question in the negative. The case stands in a similar light with respect to the *Schizonemertea* and *Hoplonemertea*, as will be seen hereafter.

If this communication with the blood-spaces is thus not demonstrated, that with the cavity of the second part of the nephridial system is subject to a much less degree of doubt; and though I did not actually see the lumen at the point of communication, I did see the communication itself as represented in fig. 4. It is then seen that this second portion is distinguished from the one just mentioned by the presence of a spacious cavity. This cavity, which may be called the nephridial canal, is first found ventrally to the glandular spongy portion (figs. 4-6), but then gradually bends upwards as it passes further backwards along the animal, until it becomes a narrow channel with a very distinct and ciliated epithelium (figs. 1, 2), which passes at a very strongly inclined angle (fig. 1) through the successive muscular layers, then makes a very sharp bend towards the exterior surface, and traversing also the basement membrane and the integument, opens on the exterior. This exterior opening has not been figured, but is found in the sections following upon that which is represented in fig. 1. The two exterior openings of the nephridial system lie on the dorsal surface of the animal, and at the same time mark the point where the nephridial system reaches furthest backwards, the glandular portion of it stretching forwards towards the head. That this nephridial canal may, at all events in its proximal part, be more or less folded, is seen both in figs. 4 and 5, *Nc*, in the latter figure the lumen having an appearance as if it were doubled.

The nephridial system of our second Challenger genus of Palæonemertea, *Eupolia*, is, as was already known from Oudemans' researches, more comparable to that of the *Schizonemertea* than to that which has just been described in *Carinina*. It offers certain peculiarities which deserve special mention. Here, too, we may distinguish, as we may throughout the whole class of the Nemertea, longitudinal and principal nephridial ducts situated in the blood-spaces or enclosed by the gelatinous tissue (*Hoplonemertea*), and transverse or deferent ducts placed perpendicular to the foregoing, varying in number and somewhat in size, and bringing about a communication between the ducts before mentioned and the exterior.

Of the aspect and situation of these two portions in a transverse section, a comparison of figs. 9 on Pl. VI. and 3 on Pl. VII. may convince us. Each of them represents