

present. This was found by me in the nephridial system of *Carinoma*, and these nephridia thus establish a communication between the internal blood-spaces (archicœlome) and the exterior. In other genera, *Carinella* excepted, similar internal communications were, however, sought for in vain. A very notable and exhaustive contribution to our knowledge of the Nemertean nephridia was then furnished by Oudemans (XXVII), and the Challenger material, which was partly made subservient to that publication, only furnishes a few additional data here worth recording, most of the peculiarities having been already mentioned by Oudemans. I hold it to be one of the principal results arrived at by this author, that he definitely demonstrated the presence in numerous species of Nemertea of a very large number of exterior openings, connected by short transverse branches with the principal and longitudinal canals of the nephridial system, and that, at the same time, he noticed that these transverse canals were paired and opposite, and showed an arrangement which might most assuredly be compared to an incipient stage of metamery in the nephridial system.

This fact is most distinctly borne out by the Schizonemertea. The Palæonemertea (at any rate the Carinellidæ) and Hoplonemertea show an arrangement which presents different features, although, again, certain Hoplonemertea (*Amphiporus lactiflorens*) answer very well to the Schizonemertean type.

A very remarkable form of nephridia is found in *Carinina grata*. The two fragments of this species that form part of the Challenger collection both contain this important structure *in toto*, so that I am able to figure both transverse and longitudinal sections. These figures are brought together on Pl. IV., and will first have to be discussed. Two portions may be distinguished in the nephridia of *Carinina*: in the first place, a glandular canalicular portion in which numerous delicate tubes appear to be closely applied together into a larger lobulate mass, which is situated right and left in the blood-space, not being freely suspended in it, but applied on one side against the muscular layers (figs. 5, 6), and on the other side, offering a free surface towards the cavity of this blood space. Pl. IV. fig. 4 gives a more enlarged view (*Nsp*) of a longitudinal section through this portion of the nephridial apparatus, and, at the same time, enables one to judge of its extension, the whole of this glandular spongy portion having been reached in this section. It is, of course, also present in other sections, but does not stretch either further forwards or backwards.

The furthest blind ends of the anterior cæca of the digestive canal are found to penetrate between the lobes of this glandular mass (*Jc*, fig. 4). These lobes are, moreover, subdivided by bundles of muscle-fibres detached from the inner circular layer (fig. 5), against which the whole apparatus is so closely applied (fig. 4, *Cm*). The cells composing the glandular portion are filled with a granular protoplasm, and have very distinct large nuclei. However much I have looked out in my different sections for a definite opening by which the canalicular system here described might enter into communication with the