

The fact that the canal is single in the Schizonemertea, whereas it is double in the Hoplonemertea, was known before (IX). It was also found to be confirmed in all the Challenger species; the bifurcation of the canal taking place in such a manner, that the one branch passes through the distinct nerve-cells, forming the greater mass of the lobe, whereas the other one immediately penetrates—more peripherally—amongst the much larger glandular cells overcapping the foregoing. *Carinina* corresponds with the Schizonemertea in having the canal single.

Having considered the central fibrous substance of the brain in the Palæonemertea and Schizonemertea, we have only to add that the Challenger Hoplonemertea have also confirmed the fact that here this fibrous core is less complicated, the brain-lobes being at the same time more compact, the cephalic nerves very numerous. In *Cerebratulus angusticeps* (Pl. XIV. fig. 6) the fibrous core is very massive and conspicuous also. As to the innervation of the numerous eyes, I have no new observations to record (*cf.* V and IX), nor as to that of the proboscis, with the exception of the fact that in *Drepanophorus* and *Amphiporus* I could distinguish numerous nerves springing from the brain-ring and corresponding to the numerous longitudinal trunks in that organ. This point, which was left in doubt by v. Kennel (XVI), is thus definitely settled. The phenomenon was particularly distinct in one specimen of *Amphiporus moseleyi* that had retained its proboscis. It has only been partly figured in Pl. IX. fig. 10, where only two are indicated, so as not to obscure the diagrams.

As to the innervation of the œsophagus, little need be said as far as the Schizonemertea are concerned, the well-known strong and double vagus nerve being constantly met with. Distinct nerve-branches are seen to take their course in the walls of the œsophagus (Pl. XIV. figs. 3, 4); it was already noticed above (p. 79) that these may be partly traced to separate branches springing independently from the nerve-plexus, whereas for the other part they are ramifications of the so-called vagus.

Nerves to the intestinal canal, very easily detected in the œsophageal region, could not be traced with the same accuracy and distinctness in the post-œsophageal region of the intestine, most probably owing to the extreme tenuity which these fine and delicate nerve-twins may here have obtained. It cannot be determined at present whether this portion of the intestine also receives branches from the œsophageal vagus system or only directly from the plexus, now that the existence of such a double method of innervation (*Cerebratulus corrugatus*) has been actually demonstrated for the anterior regions of the intestine. On *a priori* grounds, I look upon the latter arrangement as by far the most probable.<sup>1</sup>

The course of the vagus is somewhat modified in *Drepanophorus*, and perhaps in *Amphiporus*. I find the strongest nerve-stem, connecting the brain with the œsophagus, in *Drepanophorus*, running forwards instead of backwards (Pl. IX. fig. 10). Other smaller

<sup>1</sup> It should here be noticed that Kleinenberg (*loc. cit.*, p. 114) has also failed to detect visceral nerve-branches to the endodermal intestinal epithelium of the Annelid, *Lopadorhynchus*.