

It is certainly all the more remarkable that in the Hoplonemertea we nevertheless find such very distinct traces of the medio-dorsal medullary nerve, notwithstanding the disappearance of the plexus. And more remarkable still that this remnant—not distinctly traceable in only one specimen of *Amphiporus*, whilst other specimens of the same species still have it, and whilst it is even very conspicuous in *Drepanophorus* and others—should occupy the same position as it does in the most primitive Palæonemertea, *i.e.*, in or even outside the basement membrane of the integument. This is another argument for directly deriving the Hoplonemertea from the Palæonemertea. *Cephalothrix* may be said to fill up part of the distance which separates *Carinina* and *Carinella* from the Hoplonemertea as far as the situation of the nerve-system is concerned (*cf.* Pl. XI. fig. 5), whereas *Eupolia* may be said to do the same with respect to the ciliated grooves on the head, and partly also to the posterior brain-lobe, its glandular investment, and the long duct leading from it to the exterior.

We must now pass on to the description of the brain-lobes and the lateral nerve-stems.

It is known that these offer the lowest degree of specialisation in the more primitive genera of Palæonemertea, *e.g.*, *Carinella*. For this genus the brain- and nerve-stems have been sufficiently described before (IX), and, in comparing this with what we find in

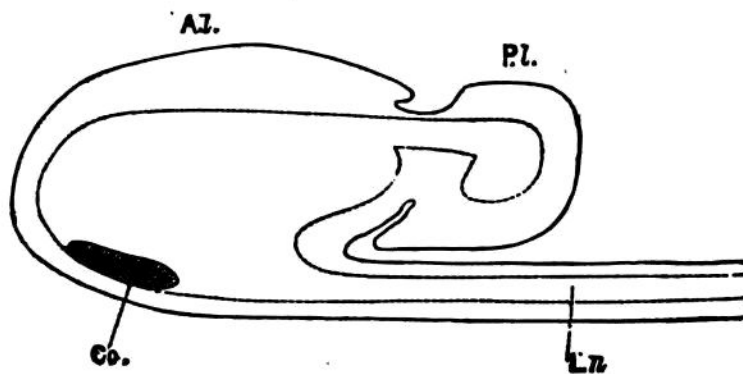


FIG. 5.—Side view of the brain of *Carinina* in outline, reconstructed from the sections. The fibrous core is indicated by a dotted line. A.L., anterior lobe; P.L., posterior lobe; Co., ventral commissure; Ln, Lateral nerve-stem.

Carinina, the latter genus must be recognised as representing in this respect a somewhat higher scale in the developmental series. This higher development finds its expression in the presence of a posterior brain-lobe, comparable to the same lobe of the Schizonemertea which was often designated as the *side organ*, although it is formed of nerve-substance directly merging into that of the brain. *Carinella inexpectata* has been formerly shown (VIII) to possess a ciliated passage leading into the brain-substance, without any special differentiation of that portion of the brain into which this ciliated channel penetrates. In *Carinina* such a differentiation has set in, and the brain-substance, into which a ciliated canal leads, has become a separate lobe.¹ In consequence of this we are, moreover, enabled to draw a general—though by no means a sharply defined—distinction between the portion of the brain-mass with which this accessory lobe is in contact, and

¹ Chapuis has lately noticed posterior brain-lobes in a *Cephalothrix* (*Arch. d. Zool. Exp.*, vol. iv. p. xxi., 1886). His description is, however, very incomplete.