

known to M'Intosh, Graff, and other observers, and which I have again met with in the Challenger Hoplonemertea, cannot be more circumstantially described. Moreover, the stylets in the different Hoplonemertea did not offer any remarkable deviation from the well-known type, and though the transverse sections gave very clear details regarding the arrangement of the muscle-fibres in the muscular bulb, about the epithelium of the glandular duct that conveys the probably venomous secretion of the posterior cavity to the base of the stylet, &c., these are only confirmations of facts already known and need not be recapitulated here. The shape of the stylets was mentioned when the species were described; those of *Drepanophorus*, though not obtained from an actual Challenger specimen, are represented in the woodcut on p. 16.

The muscular walls of the proboscis differ in the various genera, and these differences speak for themselves when we compare figs. 11 and 12 of Pl. II., and figs. 1, 2, and 5 of Pl. III. (*Carinina*), fig. 11 of Pl. VI. (*Eupolia*), fig. 7 of Pl. VIII. (*Pelagonemertes*), fig. 6 of Pl. XII. (*Amphiporus*), and figs. 2 and 3 of Pl. XV. (*Cerebratulus*). These latter show the muscular layers of the proboscis of the Schizonemertea to be a repetition of the muscular layers of their body-wall: a circular layer between two longitudinal ones, the circular layer giving off fibres at diametrically opposite poles to the external membranous sheath (*b*), and moreover, a nervous plexus (*n. pl.*), which is also situated between the outer longitudinal muscular coat γ' (that just below the epithelium), and the circular one β' . This nerve-plexus does not go all round, at least it cannot be distinctly made out except throughout one-half of the circumference. It is also traversed by radial fibres, and is again replaced by definite longitudinal stems when we examine a transverse section of the proboscis further back (Pl. XV. fig. 3). These longitudinal stems are characteristic of certain species of *Cerebratulus*, and a plexus, even a far more complete and cylindrical one than the one figured (Pl. XV. fig. 2) for *Cerebratulus macroren*, is characteristic of others. The nerve-stems enter the proboscis at its point of insertion, and spring from the right and left extremity of the ventral brain commissure.

In the posterior regions of the proboscis of *Eupolia*, of *Pelagonemertes*, and of nearly all the other species, the musculature appears to be reduced to a simple longitudinal layer, carrying the epithelium on one side, and being held together by an ensheathing membrane on the other (Pl. VI. fig. 11, and Pl. VIII. fig. 7).

In *Carinina* there is an additional circular layer, and the remarkable fact, which has been already noticed above, of the situation of the nerves still enclosed in the epithelium.

In *Amphiporus*, *Drepanophorus*, and *Pelagonemertes* (anterior portion) the proboscis-wall exhibits the notable complications corresponding with the curious disposition of the nerves in the proboscis, and which was described in sufficient detail by M'Intosh (beaded layer) (XIX, XX), myself (IX), von Kennel (XVI), and Graff (III). To von Kennel the merit is due of having definitely established the nervous significance of the parts in question. The innervation may here be