

unknown invertebrate ancestors, and I have insisted not only on the possibility of the homology between the Nemertean proboscis and the hypophysis cerebri of the Vertebrates, but I have, even earlier still, attempted to show that the nerve-system of these two groups might be considered in a common light, as was first indicated by Harting in his *Leerboek van de Grondbeginselen der Dierkunde* of the year 1874. Further reference to the hypothesis here alluded to is found in Balfour's *Monograph on the Elasmobranch Fishes* (pp. 170-172), in my own publications (IX, X), and in Balfour's *Comparative Embryology*¹ (vol. ii. p. 258). I will not here enter upon this hypothesis more fully, but will briefly state that it attempted to consider the central nervous system of the Vertebrates as a possible median coalescence of two nerve-trunks, that were lateral in the primitive ancestors of the Vertebrates, in the same way as the coalesced ventral nerve-cord (Bauchmark) of Annelids and Arthropods may be considered with Gegenbaur as having arisen out of a double lateral trunk, which in certain, still more highly differentiated forms have fused ventro-medially.

A strong argument against the first-mentioned hypothesis is the fact that the spinal cord ontogenetically always makes its appearance as a median unpaired plate or thickening, a very faint trace of a possible double origin of this plate being hitherto only observable in one species of Amphibia, *Triton tæniatus*; whereas in all other vertebrates, *Amphioxus* and the Cyclostomata not excepted, the unpaired origin is most evident. The bilateral symmetry of the full-grown brain and spinal cord is a much later feature, and can hardly be regarded as the expression of a primary coalescence of two separate halves to form a median whole.

I am the more inclined to abandon this hypothesis, because I will attempt to show that we can establish phylogenetic comparisons between the Chordate and the Nemertean nervous system on a much more simple basis; comparisons which at the same time cover a far more extensive ground than did those of Harting, Balfour, and myself, which I have just alluded to.

Since in the nervous plexus of all the Nemertea a median longitudinal tract, sometimes of comparatively large size, has now been detected, since even in the Hoplonemertea, where the plexus has disappeared, the same medio-dorsal nerve-tract has in most cases been preserved, and, finally, since from this dorso-median stem metameric and paired nerve-tracks may be seen to emerge in Palæonemertea and Schizonemertea, we must inquire in how far the direct comparison of this medio-dorsal nerve-stem with a primitive spinal cord may be said to hold good.

In order to do this we must first consider the relation of this stem, to which we have given the name of medullary nerve or medulla, to the rest of the nervous system, more

¹ It may here be remarked that Balfour has omitted to mention that Harting was the first to bring forward this hypothesis: it is well to be reminded of this when Beard, Bateson, and others similarly ignore this claim to priority of my venerated predecessor.