

“ We agree with Gaskell that the term sympathetic should be suffered to fall into disuse, as tending to perpetuate the old conception of the primary importance of the longitudinal nerve-tract ; whereas the leading fact is the metamericly recurring outflow of visceral fibres, which may or may not be united together by successive longitudinal commissures.”

In the Nemertea this anterior “ fusion of the great commissural systems ” is foreshadowed at the point where brain-lobe, lateral stem, and “ vagus nerve ” meet, or rather diverge. It has been attempted in figs. 1 and 2 to indicate the points here alluded to in a general way, special comparisons being, on the grounds that have been stated, purposely avoided.

If we now turn to Dohrn’s and Semper’s hypothesis we must recognise that no such satisfactory general comparisons are there possible. Even if we were inclined to accept the “ turning over ” of Geoffroy St. Hilaire, by which back and belly became exchanged, and to admit the brain-piercing œsophagus, regarding the Annelid supracœsophageal ganglion and the ventral nerve-cord as respectively homologous to cerebrum and medulla, it must still be conceded that we have not then in any way before us a nerve system offering as many points of comparison with the Vertebrate system as does that of the Nemertea.

Concerning the Annelids we have no observations by which the cephalic ganglia and the cephalic nerves are so clearly foreshadowed, none which would throw light on the origin of the vagus, its connection with the nervus lateralis and with the anterior cephalic ganglia, none concerning the sympathetic system and its blending with the vagus system in the lowest Vertebrates, indications of which are even retained in the highest. Nor is the ventral nerve-cord of Annelids, with its undeniable *double* character and double origin a match, so far as comparison goes, for the Nemertean medullary nerve, with its transverse nerves preceding the spinal nerves of *Amphioxus* and the Cyclostomata.

And if we are then asked to consider the lens of the Vertebrate eye as a modified ectodermal branchial invagination, as the outer portion of what was once a functional gill-slit,¹ we feel that the ground under our feet is becoming rather uncomfortable, and that it is high time to reconsider whether all these ingenious speculations in which the most beautifully pliable hypothetical and unknown Annelids play a too conspicuous part should not be definitely abandoned, and a new departure made by those who are interested in the phylogeny of the Chordata. In due time arduous and detailed morphological investigations on the Platyelminthes in general, and on the Nemertea in particular, may then lead us to more satisfactory conclusions than are the *fata morgana* that are so temptingly evoked before our eyes by the ingenious manipulations of the indefatigable founder of the first and foremost Zoological Station, when, following his lead, we find ourselves wandering in the barren deserts of that province of phylogeny, in which he attempts to establish a close connection between Chordata and Annelida.

¹ Dohrn, Studien, x. p. 459, 1885.