

*Nymphon* in a much more rudimentary state. Nobody would conclude, however, from their presence that the first ganglion was originally composed of four ganglia; but the supposition of its being formed of three nuclei loses at the same time much of its value, and the ventral part of the proboscis must be considered as being innervated by the same original ganglion as that which gives off the nerves for the palpi.

I believe there can be no doubt that we have here the original condition of the nervous system; at the same time this fact may be considered as suggesting the opinion that the palpi originally belonged to a pair of appendages which coalesced to form the two undermost of the three parts of which the proboscis is composed.

The two front nerves of the first thoracic ganglion in *Nymphon* and *Phoxichilidium*, and the strongest of the two front nerves of the same ganglion in *Colossendeis*, enter the proboscis and run forwards exactly in the middle of the two ventral parts of the proboscis, which I compared (note on p. 14) with the carpels of a monocotyledonous fruit. These nerves I call the paired proboscideal nerves. They end, like the azygous proboscideal nerve, by entering a ganglion, placed at about the same distance from the end of the proboscis as the ganglion of the azygous proboscideal nerve. These three ganglia are united by a ring, which runs between the outer wall of the proboscis and the chitinous wall of the œsophagus, among the numerous muscles which run from the one wall to the other.

So far my description quite agrees with that of Dohrn, as given above. However, a considerable difference arises from the fact that the ganglia which were seen by Dohrn are not to be considered as ganglia of the azygous or paired proboscideal nerves, but as being really the terminal ganglia of three strong nerve bundles, composed of nerve fibres and ganglia, which run longitudinally below or above the three stout proboscideal nerves, so that they lie between these nerves and the wall of the œsophagus. The discovery of these three ganglionic nerve bundles has been very fortunate. It is curious that they have hitherto been always overlooked, and especially that Dohrn did not observe them. But then it must be considered that these nerve bundles are placed among numerous muscles running over and beneath them, and making a preparation totally impossible. A successful longitudinal section, made exactly above or below a bundle, is the only way to detect it. I call these bundles ganglionic, for although I do not believe that their function is analogous with that of the sympathetic system of higher animals, yet their structure shows in general the same relative distribution of ganglion cells and nerve fibres as in the case of the ganglionic system of higher animals.

Fig. 6 on Plate XVIII. shows the position of these nerves in the proboscis; while fig. 8 shows a part of one of them more strongly magnified. Each of them (*g*) consists of a strong bundle of nerve fibres, which, posteriorly at irregular, anteriorly at more regular distances, are surrounded by groups of ganglion cells. Thus each of the