

rounded spot distinguishable by its transparency. The optic nerves are represented by two strong bundles of nerves, arising as in *Colossendeis megalonyx* (Pl. XVIII. fig. 4, o) laterally from the dorsal anterior surface of the ganglion. These nerves divide into stronger and feebler branches, and the latter have small ganglia between them. Such small ganglia are present also on the interior surface of the small transparent spot representing the rudimentary eye. They are in relation partly with the nerve fibres of the so-called optic nerve, partly with the complicated system of nerves and ganglia, which covers in this species as in the other species of the same genus, the internal surface of the integument. In this species of the genus *Colossendeis*, and from what I have seen of the matter, the same is the case in *Colossendeis leptorhynchus* and *C. megalonyx*, the optic nerve-bundles are really integumentary nerves, giving off the nerve-branches, which, as will be shown hereafter, extend all over the inner surface of the integument, having everywhere ganglia between them, and, as a rule, at small distances from one another.

I feel inclined to consider the condition of the eye, and of its innervation as described for *Colossendeis proboscidea*, as the original condition in the Pycnogonida. As an example of the most highly developed condition, I wish to describe that of *Nymphon brachyrhynchus*. Dorsally the supra-oesophageal ganglion gives off two nerves, which are at their origin quite covered over by ganglion cells (Pl. XVIII. fig. 11 C. o'). Where they arise from the ganglion, the distance between the two nerve-bundles is not very considerable; they diverge slightly till they reach the base of the oculiferous tubercle. Here each of these nerve-bundles divides into two branches which run horizontally, the one towards that part of the integument which is before, the other towards that behind the oculiferous tubercle. On reaching the integument each of these two branches divides into numerous smaller nerves and nerve-fibres; moreover, they send upwards numerous nerve fibres, which penetrate the oculiferous tubercle and extend till they reach the outer wall of the eye. There can be no doubt, therefore, that the eye is innervated by nerve-fibres not united together so as to form a distinct optic nerve.

The same mode of innervating the eye I observed in *Nymphon strömii*. For the study of the innervation of the rudimentary eye of *Nymphon robustum* I got good preparations also. A part of one of these is figured in Plate XVIII. fig. 5. We have the same nerve-bundles covered by ganglionic cells; they do not, however, divide immediately into the stronger integumentary and smaller optic nerves, but before doing so they enter a comparatively large ganglion (fig. 5, g) from which these nerves are seen arising. This same ganglion gives off also the nerves for the setæ, which in this species are present in considerable number at the tip of the oculiferous tubercle.¹

¹ This quite corresponds with Dohrn's observations, that the optic nerves give off also branches to the curious organs observed by him between the eyes. I believe these organs are rudimentary in *Nymphon*, in *Colossendeis proboscidea* they are totally wanting.