

sections to appear very thin in comparison to that of other species. However, closer inspection reveals (as will be more fully discussed in the paragraph devoted to the integument) that the deeper glandular layer is not wholly deficient, that it has only become intercalated amidst the outer longitudinal muscular layer, which in this species is not very massive, and that its cellulo-glandular elements thus reach amongst these muscle fibres, even as far down as the nervous layer just outside the circular muscular coat (*cf.*, Pl. XII. figs. 2, 10). The strong affinity which these gland-cells possess for staining reagents brings this out in the sections very clearly.

Nor is this the only distinctive feature of *Cerebratulus medullatus*; the second, and none the less important, is that in the nervous plexus just alluded to, the dorso-median longitudinal thickening, which I shall presently, in the anatomical part of this Report, designate as the medullary nerve, is exceptionally massive (*cf.*, Pl. XI. fig. 10; Pl. XII. fig. 9), being about one-third to one-fourth of the thickness of the fibrous core of the lateral longitudinal nerve-trunks. Amidst the fibres of this dorso-median stem a few nuclei, more faintly coloured and marking the presence of nerve-cells, are also seen.

In longitudinal sections through the same specimen, the unusual size, distinctness, and marked individuality of this nerve-stem was also very obvious.

No other features of this species will for the present be enumerated. The specimen on which it is founded was of the female sex.

I sincerely hope that the points here enumerated may enable American naturalists, when recapturing specimens of the species, to recognise it and to give us indications of its colour and other peculiarities in life, of the shape of its head and cephalic slits, and of its brain lobes and proboscis.

*Cerebratulus longifissus*, n. sp. (Pl. I. fig. 16; Pl. XV. figs. 1, 9, 10).

No other Schizonemertea were collected between the last-mentioned station and Marion Island (Station 144A). A *Cerebratulus* was here brought to light, which it will in future be easy to recognise by the fact of its having uncommonly long cephalic slits. The specimen, which was perfect, and is also characterised by its comparative shortness, is figured on Pl. I. fig. 16. On inspecting it with the naked eye the mouth was found to be small and to be situated anteriorly; the proboscidian aperture occupied the place indicated in the figure, whereas on the dorsum of the animal, just behind the end of the slits, two rows of sublateral, very small pores were noticed, being visible as extremely small white punctures. These rows were continued very far backwards. Although, on account of their reaching so very far forwards, they might at first sight be taken for the exterior openings of the nephridial system, the sections showed that they are indeed the generative pores. Moreover, that the cephalic slits, though long, are comparatively shallow, especially in their posterior portion, and that the canals leading into the posterior