

of Schizonemertea (Pl. XIV. fig. 2) I could observe that from the thickened part of the plexus, which forms the longitudinal stem, fine nerve-branches also take their origin, and pass directly to the periphery. The essential difference between Schizonemertea and Hoplonemertea in this respect nevertheless remains the same as above formulated.

We may now turn to the Hoplonemertea. The different species contained in the Challenger collection confirm the well-known facts about the metamericly placed pairs of peripheral nerves of the Hoplonemertea, some of which are turned dorsally, others ventrally, and which, dividing dichotomously, finally spread out in very numerous bundles of nerve-fibrils, serving for the innervation of the environing regions. In addition they also furnished me with certain important new points. To begin with the latter, I will first draw attention to the two longitudinal nerve-stems of *Drepanophorus lankesteri*, which are situated, as is characteristic of this genus, below the intestinal cæca (Pl. IX. figs. 1, 5, 6), about midway between the lateral margin of the body and the median ventral line. These stems in transverse section very much resemble those of other Hoplonemertea. One of them is figured on Pl. XII. fig. 5; from this it may be seen that the nerve-cellular coating is generally not distributed as a sheath all round the fibrous core, but as a double band applied upon this core at two diametrically opposite points. The participation of this cellular coating in providing the outgoing peripheral nerves with delicate nerve-fibres is distinctly seen in this section, as is also the direct continuity of other portions of the peripherally directed nerve-fibres with those of the core.

When in *Drepanophorus lankesteri* I followed some of these peripheral nerves in their further course, by examining the consecutive sections in which they are continued, I was struck by the very remarkable fact, never noticed before, that some of them did not dichotomise—or at least very rarely—and did not taper towards the periphery, but passed directly under the intestine from the one longitudinal nerve-stem into the other, a distance in this specimen of $1\frac{1}{2}$ mm. This was an unmistakable commissure, which could in no way be compared to the well-known commissure above alluded to, which connects the two longitudinal stems above the anus. And not only was one such ventral commissure present, but on closer inspection I found a great number of them, and by registering the respective distances at which they were present, the one behind the other (about $\frac{1}{7}$ mm.), I was forced to the conclusion that we here have before us a system of very regular metamericly placed commissures between the longitudinal stems, and forming a nerve-ladder (Pl. IX. fig. 10), which is very directly comparable to that of *Sabella* and other species among Annelids, and to that of *Proneomenia* and *Chiton* among Molluscs. In a few of these commissures I detected dichotomy and fusion of one of the branches thus formed with the foregoing or with the following commissure, a peculiarity also known to exist in *Chiton*, but evidently of rarer occurrence in *Drepanophorus lankesteri*. Moreover, I may also men-