

component cells are flask-shaped, the thinner extremity shoving in between the pallisade-shaped inner ciliated epithelium. Moreover, among the Schizonemertea there appear to be differences in the development of muscular tissue in the œsophageal wall, sometimes the circumœsophageal blood-lacuna directly bathing this cellular coating, sometimes (e.g., *Cerebratulus corrugatus*) a special muscular investment of conspicuous development (Pl. XIII. fig. 6, *mto*) being again present together with very strong nerves (*nv*).

The passage from the œsophagus to the sacculated intestine is more or less gradual, in the absence of any forward extension of the latter below the former, as was noticed for the Hoplonemertea.

Macroscopic dissection enables us, nevertheless, to make a clear distinction between these two portions of the gut, although microscopic investigation of transverse sections shows that, histologically speaking, the passage is tolerably gradual. The cell layers of the posterior portion of the intestine have been more than once sufficiently described (see von Kennel (XVI), pl. xviii. fig. 11), and it is not always easy to show them to be provided with a nucleus or with cilia. Still I do not hesitate to declare that the whole of the intestine is ciliated, both the central passage and the lateral, generally symmetrical cæca. But this ciliation is often rendered inconspicuous by the fact that the very elongated cells, composing the wall of this portion of the gut, are so overfilled with small spherical globules as not only to render the ciliation invisible, but even to efface the traces of the boundaries between the cells, so that in certain cases—both amongst Schizonemertea and Hoplonemertea—it would seem as if the intestinal wall were replaced by a compact mass of those globules enclosing the intestinal lumen between them. Similar phenomena were observed by Lang (XVIII) in the Polyclada, and have been described by other naturalists for other groups of Invertebrates. I will not here enter upon the question of the relation of this phenomenon to the process of intracellular digestion, which on *a priori* grounds may also be presumed to exist in the Nemertea, but will only add that the nuclei of these high and elongated cells may in favourable specimens be discerned, and are deeply situated, far away from the surface.

Whilst strong vertical muscle-fibres pass from the dorsal to the ventral body-wall in a lamellar arrangement, thus constituting what I have termed in a former publication (V) the muscular dissepiments, placed alternately between the intestinal cæca, these cæca themselves are destitute of any special musculature. The muscular lamellæ just mentioned, together with the general body musculature, appear to be sufficient to bring about all the contractions in the intestinal wall needed for the progress along this channel of the food swallowed. The intestinal epithelium itself is thus directly implanted upon the gelatinous tissue, and this phenomenon is no less clear in the Schizonemertea than in the Hoplonemertea (Pl. VIII. fig. 3; Pl. IX. figs. 1-6; Pl. XV. figs. 7, 10). Among the latter *Pelagonemertes* is the most striking example of this, because of the preponderance of the gelatinous tissue. It has been already noticed in a preceding