this muscular layer remains at the lowest level (Pl. VII. figs. 2, 5), in *Cerebratulus corrugatus* I found it very compact, and composed of very delicate fibres (Pl. XIII. fig. 6).

Another additional muscular layer, which is not found in all but only in certain Nemertea, is marked δ in the figures of Pl. XI. It is an inner circular layer, and in the more primitive types (*Carinina*, *Carinella*, and *Carinoma*) it may even become exceedingly massive. It is directly applied against the longitudinal muscular layer *a*; it forms at the same time the dorsal wall of the proboscidian sheath, the exceedingly thin ventral wall of which is in these species formed by fibres of the same inner circular layer that branch off, and are directed inwards between the space for the proboscis and the œsophagus or intestine, thus creating a floor to that proboscidian space. The inner circular layer is continued ventrally, and embraces the other internal organs as well. In *Carinoma*, where the layer has such a considerable thickness in the proboscidian and œsophageal region, and where it has disappeared in the posterior region of the body, leaving only the longitudinal and outer circular layers, the conclusion is of course tempting that the special development of this layer is in a certain functional connection both with proboscis and œsophagus. And if we then find that in the Schizonemertea this layer is absent, but that, on the other hand, there is a circular muscular coat to the proboscidian sheath and that this sheath has been raised to greater independence, and remains dorsally connected with the rest of the muscular body-wall in exactly the way it would be if it were the modified remnant of a restricted portion of the inner circular layer, we are led to the further hypothesis that these two may indeed be homologous. Thus all the transverse sections of the dorsal body-wall of Schizonemertea on Pl. XI., were they to be completed by adding the circular muscular layer of the proboscis-sheath immediately applied against them in the median line, would very strongly resemble the figures given of *Carinoma* and *Carinina*.

I will not at present venture to decide whether any of the muscular layers of the œsophagus, noticed both in *Eupolia* and *Cerebratulus* (Pl. VI. fig. 9, *oe.m*; Pl. XIII. fig 6, *mto*), may also be looked upon as derivatives of this inner circular layer, but will only add that in Hoplonemertea such a musculature is hardly developed; whereas, on the contrary, the circular muscles of the proboscidian sheath have attained a very high importance, and are even more independent of the dorsal muscular body-wall than they are in Schizonemertea (Pl. IX. figs. 1–9; Pl. X. fig. 1).

Here, too, I would be tempted to hazard a comparison between the absent inner circular layer and the musculature of the proboscidian sheath.

The detailed histology of the Nemertean muscular system is hardly in its place here, and may perhaps be more fitly reserved for the monograph that will shortly appear in the Naples series.

One point must, however, be mentioned, as its definite establishment seemed im-