

to me most probable, would go a long way to explain the high degree of sensibility of every portion of the Nemertean body-wall.

MUSCULAR SYSTEM AND CONNECTIVE TISSUE (GELATINOUS TISSUE, BASEMENT MEMBRANE, &c.).

In describing in the foregoing paragraphs the integument and its varied constituents, glands, sense-cells, ciliated cells, &c., the tacit assumption has been made that the structures there described might be looked upon as so many derivatives of the epiblast. Although reliable embryological data are as yet very scanty, my own experience on this head (XIV, XV) appeared to me to afford justification for this assumption. However, I agree that the question, whether the thin layers of longitudinal or circular fibres, that, more especially in *Eupolia* and *Cerebratulus corrugatus* (Pl. VII. figs. 5, 9; Pl. XIII. fig. 6), form so intrinsic and conspicuous a part of the integument, are also epiblastic derivatives, or whether they are due to mesoblastic elements, is open to dispute, and cannot be solved for the present on any other than the *a priori* arguments just alluded to. Hence, if I look upon the tissues that are treated of in the present section as essentially mesoblastic structures, I wish it to be well understood that this distinction may after all not be a final one.

I have purposely omitted discussing the basement membrane of the integument under the head of the integument, because it appears to find its more natural place amongst what we are now going to describe: the tissues between the outer cell layers and the intestinal epithelium, *i.e.*, the muscular body-wall and the connective tissue (better, gelatinous tissue, "Füll-Gewebe"). The latter is not only present in the space between the body-wall and the intestine (so far as it is not encroached upon by the generative, blood-vascular, or nephridial systems), but also between the individual muscle-bundles, when these are not very closely applied against each other, and outside of these, between the muscles and the integument, as the so-called basement membrane above mentioned.

The question as to the exact nature of this tissue is, in my opinion, a very important one. It represents the tissue which in Cœlenterata fills the space between epiblast and hypoblast, the "jelly" of Medusæ and Ctenophora, with its multifarious inclusions of muscular, fibrous, and eventually nervous nature. This jelly is the more important since its distribution, in the way above defined furnishes a strong argument for the view, also held by me, that the Nemertea are devoid of a body-cavity comparable to that of Arthropods, Annelids, and of Vertebrates. The only body-cavity proper to the Nemertea is the modified segmentation cavity, the archicœlome, as I have elsewhere proposed to call it (XIII, XIV). Of the cavities of the generative sacs and of the nephridia mention will be made in the respective paragraphs.