

sometimes are found to be extremely thin nerve-stems connecting the cellular integument with the central nervous system, whereas in other cases their spiral coiling and their affinity for staining solutions permits us to define them as contractile or elastic fibrils. It is, however, not to these radial fibrils that the extreme pliability and continual change in thickness of the basement membrane of the Hoplonemertea can be ascribed. This phenomenon must be an inherent quality of the tissue itself, and may be studied in every transverse section, where the outer boundary line of the basement membrane is only very rarely parallel to the inner one. Generally it is strongly undulated, in accordance with the folds and wrinkles into which the integument may be thrown, not only during life, but also when the animal is preserved in spirit. The consequence of this undulation is, that in several places the integument much more closely approaches the muscular body-wall than in others, where it is kept very widely apart, the basement membrane being in the first case compressed; in the second, extended to its utmost limit.

Together with this extension and contraction, the fine parallel stratification changes its aspect, becoming more coarse, and sometimes so coarse that it might be difficult not to look upon the basement layer as composed of fibres. A confusion with subjacent muscular layers would in some cases be pardonable. A comparison of longitudinal and transverse sections reveals, however, the fact that it is indeed no fibrillar, but a stratified condition. Another change accompanying these phenomena of extreme plasticity is the change in colour, the staining appearing far more intense when the strata are in the contracted than when they are in the expanded condition. The nuclei remain visible in both cases. How the change of shape and the successive expansions and contractions are actually brought about in this homogeneous though laminated tissue, which has more the appearance of being intercellular ground substance than anything else, must here remain an open question, which we shall again meet when treating of the contractions of the muscular body-wall.

In Pl. VIII. fig. 13, and Pl. X. figs. 1, 2, different aspects of the Hoplonemertean basement membrane are given. I will now pass to those of the Palæonemertean genus, *Eupolia*, that in so many respects leads over to the Schizonemertea. In certain specimens of this genus an arrangement, more or less corresponding to what has just been described, was in a few cases met with, the basement membrane being of about the same thickness all round, finely striated, with imbedded nuclei, and sharply separated from the integument (Pl. VII. figs. 3, 9, *Bct*).

In other cases the membrane separating the muscles and the integument is much more folded, more irregularly striated, and less characterised as a separate band of distinct tissue (Pl. VII. figs. 2, 5, *Bct*; Pl. X. fig. 6, *B*). Especially in these latter cases it is quite clear that this band of tissue, to which the name of basement *membrane* can only be applied with particular restrictions, imperceptibly passes into the connective tissue found between the longitudinal muscular bundles of the outer layer, where it is moulded