

between these bundles, and also carries in the nephridial regions the terminal deferent portions of the nephridial ducts (Pl. VII. fig. 5, *Nep*). The originally cellular nature of this connective tissue is retained in the head and in the anterior portion of the trunk, where the outer longitudinal layer of muscles is not less thick, but certainly contains a very much smaller number of fibres, because of the permanence of the intermuscular cellular stroma just alluded to. A comparison of figs. 2 and 3, Pl. VII., the one taken through an anterior, the other through a more posterior region of the trunk of a *Eupolia*, will elucidate this, as will also the comparison of fig. 5, Pl. VII., with the more enlarged fig. 6 of Pl. X. (taken from the same specimen), which represents a section through the region marked *Bct* in the former figure situated further forwards, and thus decidedly cellular as far as concerns the intermuscular tissue. One important fact is clearly indicated in this latter figure, viz., that the cells situated between the muscle bundles of the outer longitudinal layer (*γ.vl*), although their general aspect, vacuolation and arrangement very much resemble that of the similarly vacuolated cells of the deepest layers of the integument (*Jdv*), may nevertheless be immediately distinguished from these by their much larger nucleus. The same fact follows quite as unmistakably, though somewhat less clearly, from Pl. VII. fig. 2. It gives some support to the hypothesis, that the whole of the deeper cell-rows of the integument, vacuolated or otherwise, being substantially different from the subjacent mesoblast cells, may be looked upon as epiblastic. However, this question, which pertains more to an ontogenetic than to an anatomical investigation, may safely be left out of further consideration. This basement tissue of *Eupolia*, much less regularly arranged than in *Hoplonemertea* and in the *Carinellidæ*, is thus still directly homologous with that of the latter.

A secondary external homogeneous basement layer is found immediately below the outer stratum of unicellular glands of the integument; in the paragraph devoted to the integument the comparison with *Carinina*, *Carinella* and *Carinoma* has been already instituted, and it was at the same time shown in what way these different arrangements may be identified with one another.

In the anterior portion of the body the stratified basement layer *Bct* (Pl. VII.) fuses with the sparse intercellular tissue that is present round the vacuolated cells, and appears to be a direct continuation of it. In the posterior portion, however, where the muscular bundles are more strongly developed, this stratified tissue appears more limited to the region between the muscles and the integument, principally because here the character of the intermuscular tissue is also changed and becomes more homogeneous, although it is here and there traversed by radial fibres, is also provided with nuclei, and contains numerous nerve-tracts. The general aspect, and the effect of the staining reagents, show this intermuscular tissue to be identical with the homogeneous, more or less gelatinous tissue, that is observed between the outer longitudinal bundles of *Carinina* (Pl. III. fig. 6). The cells, of which traces are found