

thickness of the layers, above described as integument, does not vary very much in smaller and larger-sized individuals. Also, in the tip of the tail, where growth is continually going on, and where the newly formed parts are thus, in the first instance, found, the integument is very much in advance of the underlying tissues in obtaining its definite size. For example, in *Drepanophorus lankesteri* I find the cellular integumentary layer (the basement membrane not included) to be on the thickest part of the body, 0.15 mm. (*i.e.*, one-twentieth the horizontal diameter in this region), and close to the tail end 0.1 mm. (*i.e.*, one-tenth the horizontal diameter in this region). In the largest specimens of *Amphiporus moseleyi*, which have more than twice the length and more than two and a half times the transverse diameter of *Drepanophorus lankesteri*, I find the integument to measure 0.12 to 0.15 mm.

Both in specimens of *Amphiporus moseleyi* and in one of *Amphiporus marioni*, as well as in one of *Drepanophorus*, it is easy to demonstrate glands in the integument by the evident presence of the secretion, partly extruding towards the exterior, partly still enclosed between the deeper layers (Pl. X. fig. 2). These glands are, however, neither so massive, nor do they form such a conspicuous layer as in *Carinina*, above described. Whether they may be regarded as unicellular, and as comparable to the superficial ones already mentioned in the integument of *Eupolia*, and also present in the Schizonemertea, or whether they are more directly homologous to the deeper glands of that division, is for the present difficult to decide by means of the preserved material in the Challenger collection. Histological investigation of fresh specimens will be necessary to clear up this point. *Drepanophorus serraticollis* would certainly tend to a direct comparison with the flask glands of *Cerebratulus*, &c. In a general way, however, the Hoplonemertean integument offers more analogy to the more primitive arrangement than to the higher differentiation of the layers in *Eupolia* and the Schizonemertea.

One further detail deserving mention is the presence of a granular deposit (pigment?) in the lower cell-strata of the integument of the last mentioned specimen of *Drepanophorus*. This deposit is different from the one hereafter to be mentioned in the tissues of *Amphiporus marioni*. A deposit comparable to the latter was absent in the specimen of *Drepanophorus* here alluded to. The granules have more resemblance to the pigment granules of *Eupolia delineata*, described above, and may probably be looked upon as such.

While we see that the Hoplonemertean integument is directly connected—at least in general outlines—with that of the Palæonemertean genera *Carinina* and its allies, the Schizonemertea are linked to the primitive stock by the intervention of *Eupolia* and *Carinoma*.

Certain Schizonemertea (*e.g.*, *Cerebratulus corrugatus*) in some portions of the integument reveal a complete uniformity with what we have described for *Eupolia*; a stratified basement layer separating the outer longitudinal muscle-bundles of the body-wall from the layer of vesicular tissue sustaining the deeper skin glands, these glands