

also lettered *B* on Pl. VII., but to be so with the deeper layer, *Bct* of the latter plate; and (2) in comparing the glandular structures of *Carinina* more especially with the deeper layer of glands of *Eupolia*, and in looking upon the unicellular glands of the latter as more particularly developed in the outermost layer. These latter are then comparable to the smaller and superficial unicellular glands which are met with in *Carinina* (Pl. IV. fig. 1). Similar considerations concerning the homology of the different portions of the integument can be applied, as we shall see in the sequel, to the Schizonemertea, their integument in so many points resembling that of *Eupolia*, and being thus also linked to that of *Carinina* by intermediate forms, such as *Carinoma*.

Amongst the Hoplonemertea it is most difficult to obtain specimens in which the integument is in a fair state of preservation. Even in the specimens that have been treated with special care, it is a rare occurrence to find a portion of the integument in which its different layers can be clearly made out.

From what I have noticed in the Challenger specimens, there is a certain amount of uniformity which must first be noticed and compared with what obtains in Palæonemertea and Schizonemertea. Sharply distinct from the basement-membrane, which, after removal of the integument, would even show a more or less honeycombed surface, are the deeper cell-layers of the integument, the rounded bases of these cells fitting into the honeycomb-like pits in the basement-membrane just alluded to (Pl. X. fig. 2). These cell-layers, with very distinct nuclei, are in thin sections many rows thick. The nuclei are, however, never so close together as they are in the subsequent layer, which is generally situated about halfway between the basement-membrane and the ciliated surface (Pl. X. fig. 1). On teasing out the elements of this layer, we find long spindle-shaped cells, considerably thinning out at the ends, and only bulging at the spot where the deeply stained nucleus is situated. These nuclei, again arranged in several rows even in the thinnest transverse sections, are there disposed so as to fit close between each other, the thin ends of the cells being directed one towards the outer surface and the other towards the deeper layers before mentioned. It cannot be doubted that sense-cells, which very generally have a similar shape and position, are among these (*cf.* Dewoletzky, II). Towards the outer surface, the remaining stratum of the integument has the peculiar radially streaked appearance already described for the Palæonemertea; nuclei being rarer in this layer than in the two foregoing. Finally, the cilia are implanted upon the outer margin of this region, and teased preparations reveal the presence of special cells with a nucleus of a very much paler hue, and very faintly coloured. Only in a few preparations have the cilia been well preserved; a cuticula upon which they are implanted, as elsewhere (XIV) described in embryonic stages, was also only noticed in certain favourable sections.

These are the principal features marking the integumentary system of the Hoplonemertea. A few further details, however, may still be added. The deepest layer (Pl. X. fig. 2) contains fibrous nerve elements, not distinctly indicated in the figure. The absolute