

above—remains the same in the adult, and we have in this more superficial situation of the central nervous system one of the surest indications of the more primitive position that ought to be assigned to *Carinina* and the allied genera, when compared with the other Nemertea.

The intermixture of integumentary and nervous tissue is none the less evident in the medio-dorsal longitudinal nerve than in the lateral stems. The first named nerve, which in former publications (IX, X) I have, not wholly adequately (*cf.* p. 132), designated as the proboscidian-sheath-nerve, can readily be distinguished in my transverse sections of *Carinina* as a delicate stem. It is not situated, as in the Schizonemertea, just outside the circular and below the outer longitudinal muscular coat, nor, as in *Drepanophorus*, *Amphiporus marioni*, &c., below the basement membrane just outside the same circular muscular coat, but it lies in this case *actually outside the basement membrane, and forms part of the deepest layer of the cellular integument.* Further, a plexus-like distribution of nervous tissue between dorso-median and lateral nerve-stems obtains in this species, as was more fully described elsewhere for the Schizonemertea, connecting the three longitudinal stems and spreading round the body as a cylindrical investment. It must be remarked that this plexus-like arrangement is thus necessarily situated in the very layer of the integument with which we are occupied, and it may be added, that in numerous transverse sections of *Carinina* the presence of fibrillar nerve-tracts in this layer can be easily demonstrated, and these exactly resemble those that are met with in the nervous plexus of Schizonemertea. This plexus has, since my first notice of its presence (IX, X) been again observed by Dewoletzky (II) and other naturalists, and will be more fully discussed in a succeeding paragraph.

The plexus here alluded to merges into the lateral nerve-stems. I may here once more emphasize the fact that the whole system lies outside the basement membrane. At the same time, however, the lateral stems would seem to be separated, though very incompletely, from the integument by bundles of fibres which bind them down to the underlying layer of circular fibres (Pl. III. figs. 7, 8.)

In the vicinity of the brain-lobes it is impossible to distinguish between the cells of the deepest integumentary layer and the nerve-cells. With respect to this layer I have further to state that its nuclei are less conspicuous, its cells paler, and the boundary lines of the latter less easily distinguished than in the other layers. Extremely delicate fibrillar tracts were already noticed as occurring in it.

The next layer to this, when we pass outwards, is the glandular layer of the integument. It is the thickest of the four, being alone often as massive as the three others taken together. The large, flask-shaped, and tubular glands it encloses contain a thick granular secretion, which is partly stained brownish-yellow, partly dark red in my preparations (Pl. III. figs. 3, 7, 8, *gi*; Pl. IV. fig. 1; Pl. VI. figs. 1–3). The ducts leading to the exterior penetrate the two outermost layers. The presence in the most peripherally