

has been acquired by two superposed layers of the basement membrane of *Pelagonemertes* (Pl. VIII. fig. 13, *B*, *B'*); the outer one being darker than the inner. I have no explanation to offer of this phenomenon, nor of the fact shown by the same figure (Pl. VIII. fig. 13) that the same phenomenon is repeated just below the basement membrane, the jelly between the bundles of longitudinal muscles being much darker than that which is found inside. The latter, into which the former gradually merges, is not specially indicated in fig. 13. Mention ought here to be made of what is marked *dr* in that figure, and what appears to be in several cases (Pl. VIII. fig. 5) a central cavity enclosed by peculiar cells, of which the nuclei are specially distinct. I must leave it undecided whether these structures, radially directed towards the surface of the body, are the same as the masses *dr* (Pl. VIII. fig. 4), which I see in a glycerine preparation of the integument made by Professor Moseley on board the Challenger from the fresh animals, and also whether these structures might be looked upon as glandular, and comparable to similar gland-masses in the jelly of *Amphiporus moseleyi* (Pl. XV. figs. 11, 12).

That the course of the fibrils traversing the jelly is in no way strictly limited to certain directions, but that we find them now parallel to the proboscidian sheath, now to the intestinal wall, now convergingly directed against the generative ducts, is sufficiently demonstrated in Pl. VIII. figs. 3, 8. A very large number are, however, radially directed towards the surface, and though it was not observed in one section, it might perhaps be possible to find dorso-ventral fibres uniting both surfaces. That the nerve-stems, springing from the lateral cords *N* (Pl. VIII. fig. 3), are indeed encased in a tubular space bounded by darker stained gelatinous substance, is best seen in fig. 6 of the same plate, as well as the fact that in the immediate neighbourhood cells and fibres (*f*) form part of that substance.

In the other Hoplonemertea this continuous jelly, though much less prominent, has very much the same character as in *Carinella*, with the exception that no special tubiform tracts for the passage of nerves, &c., are as distinct as they are in *Pelagonemertes*. The passage of radial fibrous tracts through the gelatinous tissue is, however, everywhere demonstrable (Pl. X. figs. 1, 2), as is also the origin of these fibres out of cells (Pl. X. fig. 2), and the continuity of the gelatinous stroma with that contained between the muscular bundles of the body-wall. The Challenger Nemertea not offering anything very special in this respect, I will postpone a more circumstantial discussion of this tissue for the monograph which I am preparing for the Naples series.

Similarly I may rapidly call to mind that, in the Schizonemertea, where this gelatinous substance is best observed in the posterior region of the body, and better in large specimens than in small ones (Pl. XV. figs. 7, 10), it offers the same characters. Anteriorly, where the circumoesophageal blood-space is present, it does not play any conspicuous part; posteriorly, however, it carries not only the tubular continuations of this space (the three longitudinal blood-vessels) but also the other internal organs, to all of which it is closely applied.