

and the whole completed into a more or less oval cup-form of which the anterior part shows very distinct cellular elements with nuclei. Distinct lenticular structures, which were formerly noticed in Mediterranean Nemertea, could not be certainly made out in the Challenger specimens. What varies most is the pigment coating the posterior hemispherical surface. Sometimes this pigment is intensely black, and so extremely fine that it looks almost homogeneous (*Amphiporus moseleyi*), whereas in other cases (*Amphiporus marioni*) the pigment granules are uncommonly coarse and large sized, the colour being in this case a brownish-green rather than black.

In discussing the further sense-organs of the Nemertea, a great significance must certainly be ascribed to the sensory elements distributed in the skin, and primarily serving for tactile functions. With respect to this organ of sense, the spirit specimens at my disposal have, however, revealed no new facts of importance. I have only convinced myself—as has been already noticed both when describing the cellular integument and its innervation—of the presence of distinct sense-cells in all parts of the integument. They have the well-known form of the sense-cells described by the Hertwigs, by Lang, and by others in the Coelenterata, in the Platyelminthes, &c., and it is to them that the extreme delicacy of the tactile sense, which is revealed in living specimens of Nemertea, must be ascribed. Bateson's fig. 77<sup>1</sup> of *Balanoglossus* comes very close to what was observed in the Nemertea in connection with these sense-cells. Their direct innervation by nerve-fibres, starting radially from the plexus in the two more primitive groups, has been noticed above (cf. Pl. XIII. fig. 6; Pl. XIV. fig. 2). Sense-cells with distinctly longer and stiffer hairs, such as I have been able to observe in living specimens from the Bay of Naples, have not come under my notice in the Challenger sections. The similarity with *Balanoglossus*, just alluded to, is increased if we consider Bateson's figs. 70, 75, and 79, and compare them with the integument of *Carinina*. The similarity is significant. In sections of *Balanoglossus* made by myself I was very much struck by this resemblance, reaching from the cilia down to the nerve-plexus and subjacent muscles.

Another question I wish to allude to here, and which has been pressed upon me by certain of the Challenger specimens, is whether the terminal transverse furrow which is encountered at the tip of the head in *Carinina* (Pl. I. fig. 1-3; Pl. II. fig. 1), which is also distinctly seen in certain *Amphipori* (Pl. IX. fig. 9), has not also primarily a tactile significance. And, in addition to that, I wish to ask whether we might not look upon this terminal groove, which lies more or less in a horizontal plane passing through the animal, as having preceded the paired longitudinal cephalic furrows which form the distinctive feature of all the Schizonemertea. When considering the probability of this suggestion, the following points should not be lost sight of—(1) that in certain *Cerebratuli* these cephalic furrows do meet at the tip of the head (Pl. I. figs. 13, 14, 18, 19); (2) that the furrows in this case are comparatively short (figs. 13, 14);

<sup>1</sup> *Quart. Journ. Micr. Sci.*, June 1886.