

They are reproduced both in the Narrative of the Cruise (vol. i. pt. ii. p. 831) and on Pl. I. figs. 1-3. There is no trace of longitudinal lateral slits—so characteristic of the Schizonemertea—but a terminal crescentic groove (marked out by darker pigment and by more profuse ciliation in one of the two specimens) was present in both. The proboscidian opening could be easily detected in both specimens, the subterminal mouth in one of them.

Incomplete as was the information that could be gathered from superficial examination, very interesting data came to light after the two specimens had been transferred to the microscopic slides. From specimen *a*, which was dredged at Station 45, a continuous series of transverse sections was made, whereas specimen *b*, from Station 47, was cut transversely along the region behind the brain, nearly horizontally through the brain and tip of the snout, and longitudinally through that region of the body where the nephridia are found.

It is very striking that in all these sections the cellular integument is of a considerable thickness when compared with the muscular (Pl. II.; Pl. XI. figs. 1, 2). In it we may distinguish several strata successively characterised (Pl. IV. fig. 1) by an accumulation of nuclei, by profuse integumentary gland-cells, &c., which will be more fully described in another chapter of this Report.

Curiously enough the contents of the deeper glands have a well-marked green colour in the anterior portion of one of the body fragments of specimen *b*, whereas they are brownish-red in the posterior portion, the whole fragment having first been stained with picrocarmine.

A homogeneous basement-membrane separates the integument from the subjacent muscles. This membrane is more deeply stained than other portions of the intercellular substance and thus stands out very clearly.

In the outermost cellular layer, distinct unicellular, flask-shaped glands are present (Pl. IV. fig. 1), although they are not so numerous as in many Schizonemertea. These facts authorise us to look upon the integument of *Carinina* as similar in all its essential elements to that of other Nemertea. We will further insist upon this similarity when describing *Eupolia* and *Cerebratulus*.

Before we pass from the integument to the muscular investment of the body we have to mention the central nervous system, which is found outside the homogeneous basement layer just referred to. Where the tissue of brain and nerve-stems takes its course in the deeper layers of the integument, it is directly applied against the subjacent muscles, the basement-membrane being indistinct if not interrupted beneath these central parts of the nervous system (Pl. III. fig. 7).

In addition to the two lateral stems, each transverse section reveals the presence of a dorso-median thinner nerve-stem, corresponding to what I have formerly termed the proboscidian sheath-nerve.