

PLATE XI.

Diagrammatic figures to illustrate the situation of the dorso-median medullary nerve, and at the same time the arrangement of the different layers of the body-wall and their respective relation as to size, &c.

The twelve upper figures are supposed to be taken as transverse sections just above the proboscidian sheath, and are on purpose all reduced to the same scale, by which process the relative importance of the integumentary layer is clearly brought out.

The corresponding muscular layers are indicated by the same Greek letters— α is the most important longitudinal one, common to all; β , the circular; γ , the outer longitudinal; δ is a circular muscular layer characteristic of the Carinellidæ (figs. 1, 2, 3, 6, 13, and 14); it here forms the dorsal wall of the proboscidian sheath and at the same time it forms part of the body-wall in the anterior part of the body; in all the others it has become detached and has possibly developed into the outer wall of the proboscidian sheath, and as such is not indicated in figs. 5, 7–12. J , stands for the integument; B , for the primary basement membrane separating this from the muscles; b , for the secondary basement layer.

The plexus and medullary nerve are indicated by a yellow tint.

Fig. 1. *Carinina grata*, n. sp.

Fig. 2. *Carinina grata*, n. sp. More posteriorly.

Fig. 3. *Carinella*.

Fig. 4. *Carinella*. Further back in the region where the proboscidian sheath does not extend.

Fig. 5. *Cephalothrix*.

Fig. 6. *Carinoma armandi* (M'Int.), Oud. Here the proboscidian sheath nerve lies below the medullary nerve and is thicker than the latter.

Fig. 7. *Carinoma armandi* (M'Int.), Oud. Further backwards in the region where the proboscidian sheath does not extend.

Fig. 8. *Amphiporus* or *Drepanophorus*.

In figs. 9–12 the proboscidian sheath nerve is indicated and is seen to be less conspicuous than in *Carinoma*.

Fig. 9. *Cerebratulus corrugatus*, M'Int.

Fig. 10. *Cerebratulus medullatus*, n. sp. The deeper glandular layer of the integument has fused with the outer layer of longitudinal muscles, and the primary basement membrane has thus disappeared.

Fig. 11. *Cerebratulus macroren*, n. sp.

Fig. 12. *Eupolia giardii*, n. sp.

The figs. 13–17 have reference to transverse sections of the body-wall in the region of the lateral nerve-stem.

Fig. 13. *Carinella* (for *Carinina*, cf. Pl. III. fig. 7).

Fig. 14. *Carinoma armandi* (M'Int.), Oud.

Fig. 15. *Cephalothrix*.

Fig. 16. *Cerebratulus*.

Fig. 17. *Amphiporus*.