

## PLATE III.

### Explanation of the letters used in the Plates.

<p><i>al</i> Alimentary canal.  <i>an</i> Anus.  <i>bc<sup>1</sup></i> Body-cavity of præoral lobe.  <i>bc<sup>2</sup></i> Body-cavity of second region.  <i>bc<sup>3</sup></i> Body-cavity of trunk.  <i>bp</i> Branchial plumes.  <i>bt</i> Basement-tissue.  <i>cb</i> Ciliated hypodermic organ.  <i>cm</i> Circular muscular coat.  <i>cos</i> Peculiar ciliated folds (sensory?).</p>	<p><i>gbs</i> Glandular organ at posterior end.  <i>hp</i> Hypoderm.  <i>int</i> Intestine.  <i>lm</i> Longitudinal muscular fibres.  <i>lpm</i> Longitudinal muscular coat  (somewhat pennate).  <i>m</i> Mouth.  <i>msv</i> Ventral mesentery.  <i>msd</i> Dorsal mesentery.  <i>np</i> Nephridia.</p>	<p><i>ns</i> Nerve-centre.  <i>nt</i> Nerve-cords.  <i>æ</i> Œsophagus.  <i>ov</i> Ova.  <i>r</i> Rectum.  <i>rm</i> Radiate muscles.  <i>vb</i> Blood-vessels.  <i>vc</i> Vascular spaces in region behind  tentacles.  <i>vt</i> Stomach.</p>
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Fig. 1. Longitudinal section through the base of the branchial tentacles and the anterior region of the body. The funnel leading to the mouth is indicated at *m*; *a*, the specially developed hypodermic layer with the somewhat free edge; *vb*, the vessels at the bases of the various branchial whorls, which are arranged in series one above another; *ms*, the special fan-like muscles which act on the several whorls. The large amount of skeletogenous or basement-tissue in this section is characteristic of the region. The section is slightly oblique, and thus the nephridial channel, *np*, is very distinct. The space in which the folded mesenterial organ arises is marked *cos*, and the continuation in the body-cavity, *cos<sup>1</sup>*; *cb*, the ciliated hypodermic organ; *æ*, œsophagus; *hp*, hypoderm peculiarly folded. The bases of the whorls show thickened hypodermic patches with black pigment. x 40 diam.

Fig. 2. Transverse section of the central nervous system in a young example; *nc*, finely granular tissue, with a trace of fibres. x 210 diam.

Fig. 3. Transverse section of the bases of the branchial fans, the great central muscles of which are indicated by *mc*. The knife has passed through the ciliated hypodermic organs, *cb*, on each side; *hp<sup>1</sup>*, the median ventral or anterior hypoderm which at each side gradually merges into the skeletal arches in connection with the branchial apparatus; *bpe*, the free margins of the two inner (second) branchial series of the region. x 40 diam.

Fig. 4. Transverse section of the body-wall towards the posterior end of the body, showing the somewhat symmetrical disposition of the hypodermic tissue, the long gland-cells presenting a slightly radiate arrangement towards the surface; *dm*, decussation of the muscular layers of the region. x 350 diam.

Fig. 5. Vertical and nearly antero-posterior longitudinal section of a larval *Phoronis* from the tentacles of its parent; *am*, central chamber (archenteron); *bc<sup>1</sup>*, body-cavity of the præoral lobe which forms an arch over the mouth; *bc<sup>2</sup>*, a long slit, which may represent the body-cavity of the trunk. The hypoderm is clearly outlined all over. x 350 diam.

Fig. 6. Oblique section of an embryo, showing the apparently large size of the body-cavity of the præoral lobe, *bc<sup>1</sup>*. The archenteron is indicated at *am*, but no special differentiation yet exists, since it is bounded only by the basement-tissue beneath the hypoderm. x 350 diam.