

## PLATE IV.

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The basement membrane and the nephridial apparatus are on this plate indicated by a red tint.

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- Fig. 1. *Carinina grata*, n. gen. et sp. A longitudinal section through the body-wall at the point where the terminal duct of the nephridia (*Nc*) pierces it. *LM* and *ec*, muscular layers (see Pl. III. figs. 3, 4); *B*, basement membrane; *E*, cellular integument, with superficial and deeper gland-cells, separated by a layer of closely contiguous nuclei that belong to extremely elongated cells, placed perpendicularly to the surface.
- Fig. 2. *Carinina grata*, n. gen. et sp. Section through a region where the nephridial canal (*Nc*) is still enclosed in the blood-space (*Bs*) in which a distinct cellular coating is observable, and which is separated from the intestinal caeca (*Jc*) by the inner circular muscular layer (*cf.*, *Cm*, figs. 5, 6); *LM*, the outer longitudinal muscular layer.
- Fig. 3. *Carinina grata*, n. gen. et sp. A longitudinal section through the oesophagus (*Oe*). *Jc*, its ciliated epithelium directly applied upon the muscular layers *Cm*, *LM*, and *ec* (see Pl. III. fig. 3); *PSW*, the proboscidian sheath-wall, very thin, with the oesophageal epithelium below and its own nuclei above it. This fibrous wall is confluent superiorly with the layer of circular muscles *Cm* (*cf.* Pl. II. figs. 5, 9, 10).
- Fig. 4. *Carinina grata*, n. gen. et sp. Section through the spongy and canalicular part of the nephridium (*Nsp*), and the region where it communicates with the principal nephridial duct *Nc*; *Bs*, *Jc*, *LM*, and *Cm*, as in the preceding figures.
- Figs. 5, 6. *Carinina grata*, n. gen. et sp. Transverse sections of the same system. The nephridia lie in the blood-spaces (*Bs*) which have their own cellular coating, and are partly enclosed in the circular muscular layer *Cm*. *Ps* and *Oe* indicate the respective situation of proboscidian sheath and oesophagus in relation to the nephridia; *Nsp* and *Nc* as in fig. 4.
- Fig. 7. *Carinina grata*, n. gen. et sp. A portion of the oesophageal epithelium under higher power. *Je*, the granular epithelium cells; *c*, the cuticula with the cilia.