

PLATE XIII.

- Fig. 1. *Cerebratulus corrugatus*, M'Int. Transverse section through part of the superior brain-lobes and dorsal brain commissure. Part of the fibrous core (*h*) is represented; its continuation into the fibres of the commissure (*f.co*) being distinctly noticed on the left side. On the right this connection is only visible a few sections further. The bulk of the brain-lobe is seen to consist of nerve-cells of different sizes (*n.cl*); from these a cephalic nerve (*cn*) is seen to emerge on the left, whereas this cellular coating is also continued over the commissure, and there forms the starting point (*m*) for the longitudinal dorso-median medullary nerve.
- Fig. 2. *Cerebratulus corrugatus*, M'Int. Horizontal section of the same specimen through the medullary nerve *m*. In this section only a portion of the cylindrical nerve-plexus (*npl*), of which the medullary nerve is only the median thickening, is visible. The transverse nerve-tracts *tr.n*, paired and metamerial, being thicker than the plexus, are cut along a more considerable surface and thus stand out as separate nerves. The openings in the plexus give passage to radial, transverse, contractile fibres, as is specially indicated in fig. 4, *rf*.
- Fig. 3. *Cerebratulus corrugatus*, M'Int. Portion of a horizontal section through the ventral extension of the nerve-plexus. *n*, the nerve-tissue of the plexus with nuclei of nerve-cells, and bundles of radial fibres *rf* piercing it.
- Fig. 4. *Cerebratulus corrugatus*, M'Int. Portion of the same section as fig. 2, more highly magnified. *n*, the tissue of the nerve-plexus with delicate fibres and distinct nuclei of nerve-cells, also visible in the medullary nerve *m*; *rf*, the bundles of radial, contractile fibres.
- Fig. 5. *Cerebratulus corrugatus*, M'Int. Ventral view of the head and long mouth with rugose lips of large specimen. Natural size.
- Fig. 6. *Cerebratulus corrugatus*, M'Int. Radial strip out of a transverse section in the œsophageal region. *Jsg*, the outer glandular layer of the integument (with "Schleimstäbchenzellen"); *b*, the secondary basement membrane below this; *Jcm*, the longitudinal and circular muscle-fibres peculiar to the integument; *Jdg*, the deep glandular layer just below these; *B*, the primary basement membrane of the integument radially traversed by contractile fibres (*rf*) and nerve-bundles (*n*) going towards the integument; γ , the outer longitudinal muscles; *pl*, the nerve-plexus with fibres and cells, pierced by the radial contractile bundles *rf*; β , the circular muscular layer; α , the inner longitudinal muscular layer; *cos*, the circumœsophageal intercommunicating blood-lacunæ, clothed by a cellular endothelium; *mt*, the œsophageal musculature; *nv*, nerve-tissue in the œsophageal wall; *pap*, an œsophageal papilla with deeper glandular and superficial ciliated cell-layers.
- Figs. 7, 8. *Cerebratulus macroren*, n. sp. Two sections through the principal nephridial duct of a specimen from Japan. Contracted (fig. 7) and distended (fig. 8).
- Fig. 9. *Cerebratulus macroren*, n. sp. Anterior tubuliferous proliferation of the nephridia. α , β , muscular layers as in fig. 6; *Nep*, nephridian tubules applied against the wall of the circumœsophageal blood-lacuna; *Oe*, outline of œsophagus wall.