

PLATE VIII.

- Figs. 1, 2. *Pterosoma plana*, Less. After Lesson, supposed by Moseley to represent a species of *Pelagonemertes*.
- Fig. 1. Seen from above.
Fig. 2. Seen from below.
- Fig. 3. *Pelagonemertes rollestoni*, H. N. M. A transverse section, supposed to be not quite vertical to the longitudinal body axis, so that to the right one of the digestive, to the left one of the generative cæca was touched in the section. *Ep*, external epithelial layer; *B*, basement membrane; *LM*, layer of longitudinal muscles; *J*, intestine and its branching diverticula; *N*, longitudinal nerve-stem; *bl*, two lateral blood-vessels; *Gc*, external opening of the generative cæcum; *P.S.C.*, the cavity of the proboscidian sheath; *Ps*, the wall of that cavity. All the internal organs are surrounded by and imbedded in a wholly continuous gelatinous ground substance, in which a few cells and numerous fibres can be detected, and which has more strongly imbibed the staining reagent in the immediate vicinity of the different organs and tissues that traverse it.
- Fig. 4. *Pelagonemertes rollestoni*, H. N. M. A horizontal aspect of the muscular layers of the body-wall, from a preparation made of the fresh animal by Professor Moseley. *lm*, the longitudinal muscles; *cm*, the sparse circular muscular fibres, external to the foregoing; *dr*, granular patches, eventually glandular structures; *ct*, the gelatinous connective tissue visible between the muscle fibres.
- Fig. 5. *Pelagonemertes rollestoni*, H. N. M. A transverse section of what most probably corresponds to one of the granular patches of fig. 4, furnishing arguments for looking upon the latter as glandular. A central lumen (or fibre?), with nuclei surrounding it can be detected.
- Fig. 6. *Pelagonemertes rollestoni*, H. N. M. The longitudinal nerve-stem *N*, in transverse section. A branch *n* gives off smaller nerve-twigs *n'* and *n''*. Nuclei are imbedded in the fibrous nerve substance. The gelatinous connective tissue is more deeply stained all round, and at *ff* has a distinctly fibrous appearance.
- Fig. 7. *Pelagonemertes rollestoni*, H. N. M. The posterior region of the proboscis, in transverse section. *ll*, the longitudinal muscular fibres, externally invested by a basement membrane; *E*, the epithelium, of which no details could be made out.
- Fig. 8. *Pelagonemertes rollestoni*, H. N. M. An empty genital cæcum, in transverse section. In the lower narrower part the epithelium is high and very distinct and a couple of epithelium-cells are becoming converted into ova, *ov*. *N*, the nerve-stem; *bl*, the blood-vessel; *Gc*, the empty cavity; *ctc*, connective tissue cells in the gelatinous ground-substance; *f*, fibrous tracks in the same.
- Fig. 9. *Pelagonemertes rollestoni*, H. N. M. Isolated transversely striated cells from the wall of the cavity, *Gc*, in fig. 8.
- Fig. 10. *Pelagonemertes rollestoni*, H. N. M. A young ovum.
- Fig. 11. *Pelagonemertes rollestoni*, H. N. M. A larger ovum, surrounded by its follicle cells (cf. fig. 3). No distinct nucleolus, but numerous chromatic granules inside the nucleus.
- Fig. 12. *Pelagonemertes rollestoni*, H. N. M. Portion of the proboscidian sheath, in transverse section, under higher power. *B*, the inner homogeneous limiting membrane; *lm*, longitudinal; *cm*, circular muscular layer; *ct*, the outer sheet of the gelatinous tissue immediately applied against the muscles and again more deeply stained.
- Fig. 13. *Pelagonemertes rollestoni*, H. N. M. Portion of the outer layers of the body-wall, under still higher power. The external cellular epithelium has not been represented. *B*, the thick basement membrane, below this epithelium, traversed radially by apparent glandular ducts (cf. figs. 4, 5); *B'*, a deeper portion of the same, less affected by the staining solution, and carrying connective tissue cells; *cm*, isolated circular, *LM*, thicker bundles of longitudinal muscular fibres; *dr*, probable glandular ducts in the gelatinous ground-substance penetrating through the muscles to the exterior.