[XIV.]

THE ENTEROPNEUSTA.

PART II.

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[Plates XIX.–XXII.]

INTERNAL ANATOMY OF *Ptychodera hedleyi.*

Proboscis.—In the larger specimens examined the epidermis of the proboscis has a thickness of about ·13 mm. Below the two-layered limiting membrane is the thin circular muscular layer, with a thickness of ·017 mm., *i.e.*, slightly thicker than the same layer in *P. minuta.**

Anterior to the central proboscis organs the longitudinal musculature almost entirely fills up the cavity of the proboscis; only a small circular space filled up by spongy connective tissue is left towards the centre of the latter. Below this space the centrally situated longitudinal fibres form an interlacing bundle which posteriorly, shortly in front of the central organs, divides into two portions. These pass back laterally to the central organs to take their origin with the more peripherally situated fibres from the posterior wall of the proboscis. The longitudinal musculature is not divided into radial masses.

In this species the fibres of the dorso-ventral muscle-plate are very strongly developed, with which fact is to be correlated the flattened tongue-like form of the proboscis in preserved specimens. In respect to the degree of development of the dorso-ventral muscle-plate, *P. hedleyi* may be best compared with *Balanoglossus kupfferi.*†

In my preparations of this species it can be clearly seen that numbers of the fibres of this dorso-ventral plate are inserted directly into the limiting membrane of the anterior end of the "notochord," which here is not covered by the glomerulus (fig. 6, *dsc.*). Arising in the dorso-median line the fibres of this system

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* J. W. Spengel—Die Entropneusten des Golfes von. Neapel, etc. Fauna u. Flora des Golfes von Neapel, 1893, p. 17, etc. See *ante* p. 207.

† Spengel—*loc. cit.*, pl. xiv., fig. 2.