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## II. Wissenschaftliche Mittheilungen.

### 1. Note on the »Segmental Organs« of *Serpula*.

By William A. Haswell, M.A. B.Sc. Lecturer on Zoology and Comparative Anatomy, Sydney University.

eingeg. 3. December 1884.

The pair of large and conspicuous glands found in the anterior part of the body in the members of this group have been usually regarded as the sole equivalents of the »segmental organs« of other Annelides. Claparède, for example<sup>1</sup>, regards excretory ducts for the generative products as being entirely absent — the ova and spermatozoa escaping either by rupture of the body wall or by simple permanent apertures.

The true segmental organs, however, which seem hitherto to have escaped notice, are entirely distinct from the so-called tubiparous glands, and, though of a simple type, are not unlike those of other Annelides<sup>2</sup>. They are pyriform sacs, densely ciliated internally and with delicate walls, occurring in pairs in all the segments of the abdomen. They open externally on the sides of the segments by slit-like apertures bordered by strong cilia, and, presumably, open also into the body-cavity, though I have not succeeded in finding the internal

<sup>1</sup> »Recherches sur la Structure des Annélides Sédentaires«, p. 132—135.

<sup>2</sup> Claparède asserts the contrary very strongly. »Il est certain qu'il ne se présente nul part chez les Serpuliens d'organes segmentaires de la forme typique.« (l.c. p. 135.)

opening. A somewhat unusual circumstance in connection with these organs is that, in *Eupomatus* at least, they serve not only as efferent ducts for the generative products, but as seats of development of the ova. In that genus I have found in the cavity of each segmental organ a little clump of ova in all stages of development, closely adherent together and rotating or moving to and fro under the action of the cilia; alternating with the segmental organs were the ovaries proper consisting of clumps of ova in various stages of development and occupying the normal position in the perivisceral cavity. In the male specimens which I have examined I have always found the sacs empty.

Sydney, 17. October 1884.

## 2. On the fate of the Blastopore in *Rana temporaria*.

By W. Baldwin Spencer, Scholar of Exeter Coll., Oxford.

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The following is a brief outline of the results arrived at during an investigation into the fate of the blastopore in *Rana temporaria*: I hope to publish a more complete account with figures elsewhere.

As is well known a neural groove is present in the frog's ovum traversing the whole length of the medullary plate, and reaching as far as the blastopore posteriorly.

It is usually stated that the medullary folds extend behind (posterior to) the blastopore and that, when they grow over, meet each other and enclose the neural canal, the blastopore also is enclosed and a neuroenteric canal is formed. The conclusions at which I have arrived from the study of numerous series of consecutive sections cut by means of Caldwell's Microtome are:

1) The medullary folds grow over and enclose the neural canal but not the blastopore which remains open to the exterior: the neural canal however reaches back as far as the blastopore and opens into this.

2) The hinder part of the neural canal which opens into the blastopore loses its cavity and the nervous system in this region becomes solid.

3) In the same region (that is just in front of the blastopore) the epi-, meso- and hypoblast are fused together.

4) The Blastopore never closes but becomes transformed into the adult anus.

Miss Johnson has recently shown<sup>1</sup> that in the Newt the blasto-

<sup>1</sup> Quart. Journ. Micr. Sci. Oct. 1884.