

lari media parte prorsus deficiente et re vera in lateribus colli solum distincto, scuto frenali distincte altiore discrepans.

Latera capitis, corporis, caudae maris nigro-maculata, subtus nigro-pulverulentus.

Hab. Spec. 7 inter urbes Mogador et Marocco, unicum prope urbem Casablanca (comm. ill. Hans Simon).

Francofurti ad Moenum, a. d. X Cal. Octobr. 1881.

3. The body cavity and nephridia of *Platyhelminia*: reply to M. Ed. Van Beneden.

By E. Ray Lankester, Professor in University College, London.

It is impossible to carry on a discussion concerning what has been written, when one of the parties who discuss refuses to look at that written thing concerning which the discussion has arisen. I am unwilling to occupy attention with what is after all simply an attempt to correct a mis-conception of my views. M. Van Beneden and M. Fraipont have attributed to me opinions which I do not hold and which are not to be found in my writings. When I correct M. Fraipont's mistake in this matter, M. Van Beneden comes forward and simply reiterates with a comical air of infallibility the false statement which I had but just corrected in his pupil. At the same time he makes a charge against me similar to that which I found it necessary to bring against M. Fraipont. Van Beneden says »Lankester fait dire à Fraipont ce que ce dernier n'a ni pensé ni écrit. Je ne sais ce qui a pu faire dire à Lankester: M. Fraipont's error consists in his attributing to me the view that the entire canal system of the Flat-worms is to be regarded as coelom and only the pore as excretory organ or nephridium«.

This is really very strange, and necessitates repetition of what I wrote on p. 309, of No. 85 of this journal. Immediately before the words quoted from me by Van Beneden, the reader will find that a quotation of Fraipont's words is given which constitute as any one might suppose that »qui a pu faire dire etc.«. The words of Fraipont are »il (i. e. Lankester) considère l'appareil excréteur des Trématodes et des Cestodes comme homologue de la cavité du corps des autres vers«. I protest in reply to this that (whether rightly or wrongly) I do not consider the excretory apparatus of the Trematods and Cestods as the homologue of the body-cavity of other worms and that I never did so consider that apparatus. I considered (as I shewed by citations in my article published in No. 85 of this journal) a proximal portion of the apparatus (as much as might represent in actual

bulk the nephridium of an earthworm) to be the homologue of the excretory organs of other worms and of Molluscs and quite distinct in character and origin from the distal portion of the so-called excretory apparatus of the Trematods and Cestods. It was this distal portion which I held to be the canalicular representative of the coelom of other worms. The exact termination of the excretory canal system in any Flat-worm had not been determined when I wrote, but in common with others I did not suppose that the canals ended blindly, where observation of their further course became difficult. My observations led me to hold that they terminated interstitially and to make the comparison of this part of the so-called excretory apparatus with the blood-system of a Mollusc. I am naturally therefore more likely than another to appreciate and admit the value of M. Fraipont's researches, but I can not allow him or M. Van Beneden to misrepresent me.

M. Van Beneden in spite of my courteous attempt to explain M. Fraipont's mis-conception of what I have written, persists that he knows better than I do myself what I wrote and what I meant by what I wrote. This I can not allow and once for all I must beg to assure Van Beneden that he is labouring under a delusion. He writes: »Quelle est la théorie de Lankester dans son premier travail? C'est que le système sanguin ou comme il l'appelle le système sanguino-lymphatique des animaux triploblastiques, — qu'il soit formé de lacunes, de canaux ou de larges cavités, et les canaux urinaires, quelque soit leur forme, sont des parties plus ou moins complètement différenciées et séparées d'un seul et même système d'espaces lacunaires«. Again he says: »C'est une question ultérieure de savoir, si les canaux aquifères et les espaces lymphatiques sont des parties différenciées d'un seul et même système lacunaire. Lankester professe cette manière de voir«.

In reference to this I have simply and plainly to say that Van Beneden is as wrong as he possibly can be. He has not read or if he has read he has singularly forgotten the contents of that »premier travail« to which he refers. The complete inaccuracy of Van Beneden sufficiently explains and excuses that of his pupil Fraipont, but I must say that I sincerely regret that my friend should have compelled me to write publicly a second time on the subject. In this same »premier travail«, published in the Ann. and Mag. Nat. Hist. 1873, so far from confounding »urinary canals« with any part of the blood-lymph system or supposing that the two are more or less completely differentiated parts of one and the same system of lacunar spaces, I have maintained (whether rightly or wrongly), that the urinary canals are epiblastic invaginations. as I have done at a later period in my »Notes on

Embryology«. Van Beneden will no doubt explain that he had overlooked or forgotten the following passage from p. 330 of my memoir »On the Primitive Cell-layers« published in 1873. It would be better for his reputation for accuracy and wisdom, had he not so completely overlooked it. »The communication of the mesoblastic blood-lymph-cavity or a part of it with the exterior, occurs in all Triploblastica, and is accompanied by an ingrowth of the epiblast, which, appearing in the simplest worms as the pair of segmental organs or »ciliated excretory tubes«, persists in all the subsequent modifications of the type (Echinoderms, Arthropods, Mollusks, Vertebrates)«. This passage is quoted from the memoir in which Fraipont and Van Beneden have the assurance to declare that I propound the view that the urinary canals and blood-system are differentiated parts of one primitive canalsystem!

How completely Van Beneden is ignorant of what view I had expressed in my memoir of 1873, and how ill-qualified therefore to reply to my rectification of M. Fraipont's mis-conception, is now sufficiently apparent. He is not content with telling me that he knows better than I do what I wrote, when all the time he has forgotten or never read what I wrote, but he also charges me with inconsistency (!) for maintaining in my »Notes on Embryology«, the view expressed in the words just quoted from my earlier memoir on the »Primitive Cell-layers«. He says in reference to the »Notes«: »Dans ce travail Lankester considère les canaux urinaires comme des invaginations épiblastiques, ce qui me paraît difficile à concilier avec les idées exprimées dans son premier mémoire, »On the Cell-layers«.

It will be admitted that if Van Beneden had remembered the passage above quoted from p. 330 of the memoir »On the Cell-layers«, he could not have found any such difficulty as he says he finds, in reconciling the ideas expressed in the two memoirs. He tells us that he does find such difficulty: accordingly we are justified in concluding that he did not remember the passage quoted from the memoir »On the Cell-layers«. But this passage is a prominent one and must be known to any one who knows the memoir and more especially the views expressed in that memoir as to the relationship of the body-cavity and excretory apparatus of Platyhelminths.

M. Van Beneden did not know or did not remember this passage. Hence I conclude that M. Van Beneden has been writing about what he did not understand.

The simple fact is that, in a very excusable way Van Beneden formed a wrong conception of my views on this particular matter from

reading my memoir on the Cell-layers published in 1873, and he has stuck to that wrong conception ever since and has taught it to his pupil M. Fraipont. That is natural enough: I do not expect always to be read with care especially by those who are imperfectly acquainted with the English language. The strange feature about this discussion arises from M. Van Beneden's tenacity in maintaining his false notion as to what I had written, although I have exposed the error of his pupil. At the risk of being tedious and occupying too much space with mere personal reclamation, I feel bound to meet the statements of so respected a writer as Edouard Van Beneden. I have shewn clearly enough that he is labouring under a delusion as to the contents of my memoir »On the Cell-layers« and I trust that he will bow to the inexorable logic of facts, and confess himself wrong.

London, Sept. 23, 1881.

4. Berichtigung.

In meiner Notiz über die embryonale Entwicklung des *Doliolum* (Zoolog. Anzeiger No. 92) hat sich ein Fehler eingeflochten, den ich hier rectificiren will. An der Bildung des rosettenförmigen Organes theiligen sich nicht nur das Ecto- und Entoderm des *Doliolum*, sondern auch das Mesoderm. Von den Mesodermplatten schnürt sich ein Haufen von Zellen ab, der dicht unter der Anlage des Herzens und unter den Entodermauswüchsen liegt. Diese Mesodermzellen vermehren sich rasch durch Theilung und gehen zusammen mit den Entodermauswüchsen und dem eingestülpten Theil des Ectoderms in die Bildung des rosettenförmigen Organes ein.

12. September 1881.

B. Ulianin.

III. Mittheilungen aus Museen, Instituten etc.

1. Methoden zur Anfertigung von Dauerpräparaten mikroskopischer Organismen.

Von Prof. Géza Entz in Klausenburg.

Schon Ehrenberg war bestrebt, die zartesten und vergänglichsten Wesen zu fixiren und in Präparaten aufzubewahren. In einer am 21. Mai 1835 der königl. Akademie der Wissenschaften zu Berlin vorgelegten Arbeit¹, welcher er 600 mikroskopische Objecte beifügte, be-

¹ Mittheilung einer sehr einfachen Methode zum Festhalten, Vergleichen und Aufbewahren der feinsten und vergänglichsten mikroskopischen Objecte. Abhandl. d. kgl. Akad. d. Wiss. Berlin, 1835. p. 141.

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