

- Revue des Sciences Naturelles fondée à Montpellier par E. Dubrueil, publiée sous la dir. de E. Planchon, P. de Rouville, A. Sabatier. 3. Sér. T. 4. No. 2. Montpellier & Paris (Déc. 1884.) 1885. 8^o.
- Sitzungsberichte der Naturforscher-Gesellschaft bei der Universität Dorpat, red. v. G. Dragendorff. 7. Bd. 1. Hft. 1884. Dorpat, (Leipzig. K. F. Köhler in Comm.), 1885. 8^o. (258 p.) *M* 2, —.
- Sitzungs-Berichte der physikalisch-medicinischen Gesellschaft zu Würzburg. Jahrg. 1885. Würzburg, Stahel, 1885. 8^o. *M* 4, —.

II. Wissenschaftliche Mittheilungen.

1. Note on the nephridia of a species of *Acanthodrilus*.

By F. E. Beddard, M.A., Prosector to the Zoological Society of London.

eingeg. 19. Februar 1885.

One of the strongest pieces of evidence in favour of Prof. Lankester's hypothesis, that earthworms possess typically two pairs of nephridia in each segment of the body, is afforded by the anatomical characters of the genus *Plutellus*; in this earthworm M. Perrier has described¹ an alternation in the position of the nephridia of each segment; in one segment they open near to one of the dorsal and in another near to one of the ventral pair of setae: such a fact is best to be explained by supposing the existence of two series of nephridia on each side of the body developed in connection with each of the two pairs of setae, both of which series have been partially aborted in *Plutellus*; in certain other earthworms (*Lumbricus*) the ventral series of nephridia only is fully developed, the dorsal being represented in the genital segment alone by the spermathecae and genital ducts; in *Anteus* on the contrary as Mr. Perrier has shown it is the dorsal series of nephridia which has persisted. In *Plutellus* two out of the four pairs of spermathecae open just in front of the nephridia of their segments by the same pair of setae and accordingly M. Perrier is disinclined to allow any homology between the spermathecae and the nephridia though he is of opinion (or was in the paper relating to *Plutellus*) that the vasa deferentia may possibly be the much modified equivalents of two out of the four pairs of nephridia belonging to their segments.

If the structural peculiarities of a species of *Acanthodrilus*, which I have lately received from New Zealand through the kindness of Prof. Parker, had been recorded before those of *Plutellus* the hypothesis of Lankester would have been regarded as almost proved; for in this

¹ Arch. de Zool. Expériment. T. 2. p. 245.

species we have a precisely similar alternation in the position of the apertures of the nephridia as has been recorded by Perrier in *Plutellus*, but the copulatory pouches as well as the vasa deferentia open by the ventral pair of setae while the nephridia of the same segments open in front of the dorsal pair; this is the case at any rate with some individuals: in others apparently belonging to the same species — distinguishable by no anatomical character from it — the nephridia open by the same series of setae as the vasa deferentia. Moreover there is not an absolute symmetry in the nephridia; the nephridia of opposite sides of the same segment do not invariably open on to the exterior by the same row of setae; in some of the segments also there is not a regular alternation in the position of the nephridia; the first five or six pairs all open by the dorsal pair of setae; and in other regions of the body there are occasionally two or even three pairs of nephridia in as many consecutive segments opening by the same (usually the dorsal) pair of setae. The fact however which I especially wish to record in the present note is that it is possible to distinguish by certain anatomical differences the dorsal from the ventral series of nephridia; the former consist of a convoluted glandular tube connected with the exterior by a large thin walled muscular sac; this sac no doubt represents the muscular portion of the nephridium figured by Gegenbaur in *Lumbricus* but is immensely larger: just at the point where it pierces the body wall to reach the exterior it gives off a short diverticulum prolonged beyond (above) the level of the setae in the same straight line (i. e.: transverse to the longitudinal axis of the body); in the most anterior nephridia this coecal diverticulum disappears; the ventral series differ in that the coiled glandular portion of the nephridium opens near to the external aperture of a long oval muscular sac which is thus a diverticulum of it.

2. Remarques relatives aux recherches de Mr. Vigelius sur des Bryozoaires.

Par A. Ostrooumoff.

eingeg. 4. März 1855.

Grace à l'amabilité du respectable professeur Salensky, j'eus l'occasion de connaître le travail de Mr. Vigelius: Die Bryozoen, gesammelt während der dritten und vierten Polarfahrt des »Willem Barents« in den Jahren 1850 und 1851 (Amsterdam, 1854). Les résultats des recherches de Mr. Vigelius m'étaient connus en partie d'après sa communication préliminaire insérée dans le No. 23 (1854) du

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Zeitschrift/Journal: [Zoologischer Anzeiger](#)

Jahr/Year: 1885

Band/Volume: [8](#)

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