

Die Urniere, welche bekanntlich eine innere ist, bildet sich jederseits aus einem Haufen von Mesodermzellen, in denen bald eine Höhlung entsteht. Die Säckchen wachsen bald je zu einer Röhre aus, deren eines Ende an die Oberfläche rückt, das Ectoderm durchbricht und somit eine Öffnung nach außen erhält. Das entgegengesetzte Ende der Röhre zeigt im Inneren eine Flimmerung. Eine innere Mündung der Urniere ließ sich nicht mit Sicherheit nachweisen.

3. On the Formation of Eggs in the Testis of *Gebia major*, De Haan.

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eingeg. 10. Januar 1891.

The male generative organ of *Gebia major* is a paired tube lying in the thorax and abdomen extending from the hind end of the dorsal part of stomach to the first half of the telson, just above the point where the anus opens. These tubes are united at both ends and thus form a continuous ring, the united parts forming a short unpaired tube. A glance at Fig. 1 will show clearly that they are not of equal width throughout their length, but that the anterior half is much narrower than the posterior. The vasa deferentia (*v.d.*) arise from the first third of the anterior narrower part, and run as usual much convoluted down and backward to end on the basal segment of the last thoracic limb.

In fresh specimens. the posterior wider portion appears of an yellowish colour and has even to the naked eye an undoubted resemblance to the ovary, while the anterior narrower half has to all appearance the form and structure of a testis.

Beginning with the anterior part, the testis proper, the tube presents, along its entire length, a germinal band, in which young spermatid cells are to be found. These (spermatid cells) multiply as usual by the karyokinetic division and produce spermatozoa, which lie in the saccular swellings of the testicular tube. The [ripe spermatozoa (Fig. 2 a) appear nearly of the same shape as that of *Gebia littoralis* as given by Prof. Grobben in his beautiful researches on Decapod spermatozoa. The only difference being, in our species, a spermatozoon is much smaller than those of the European species, and presents a rectangular shape when seen from the side and not oval; the sides free from spines being flattened. It has moreover a round refracting body (centrosoma?) near one of the flattened surfaces on the side of the nucleus. Treated with Flemming's solution, the entire spermatozoon shows a narrow dark coloured peripheral (protoplasmic) zone

prolonged to three rather short spines, and a central less deeply coloured nucleus. The chromosoma could not be distinguished either in stained or in unstained preparations.

Passing now to the posterior ovarian part we find the same germinal band extending directly into this part, and producing, by diffe-

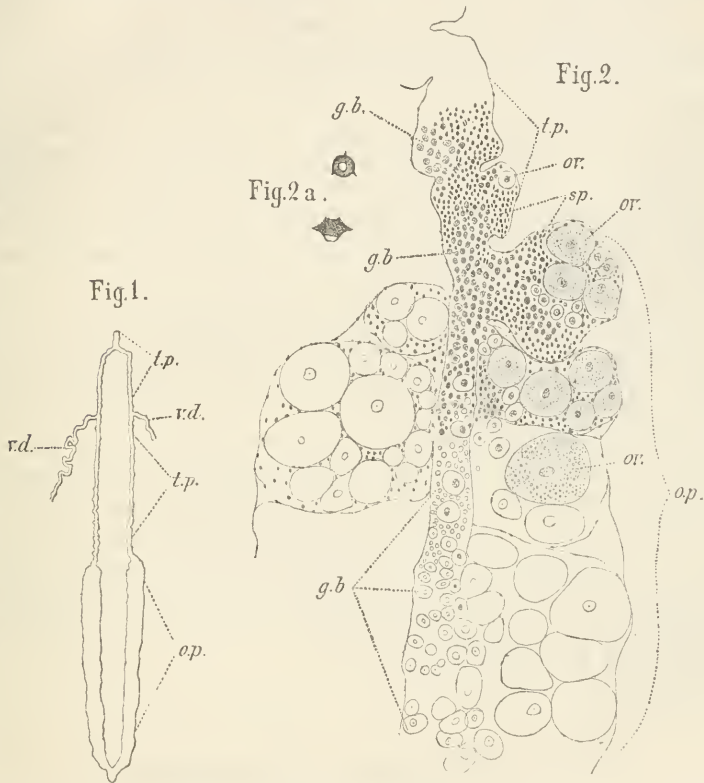


Fig. 1. Testis of *Gebia major* seen from above. Natural Size. *t.p.* testicular part; *o.p.* ovarian part; *v.d.* vasa deferentia.

Fig. 2. Longitudinal Section through a part of the Testis, where the testicular part passes into the ovarian; *t.p.* testicular part; *o.p.* ovarian part; *g.b.* germinal band; *sp.* Spermatozoa; *ov.* ovum. 1/1 X Seibert.

Fig. 2a. Ripe Spermatozoa seen from above and from side. I VII X Seibert.

renciation of their cells, [the egg cells, which project out in form of lateral sacs as in the testicular part. The eggs are also found at different stages of development, some producing even a vast] quantity of yolk granules.

Owing to the large size of eggs]and consequently of the lateral saccular protuberances, the germinal band comes here to lie in the

centre of the tube. As will be seen in Fig. 2 the first lateral sacs in the ovarian part are interesting, as here we find not only eggs but also ripe spermatozoa lying between them, thus showing very clearly both kinds of cells arise from the same lot of indifferent germcells.

Sometimes we also meet with well developed egg cells in the first testicular sac, as will be seen at the right hand side on the Figure.

This condition of things was found in all the male animals I saw. I examined in all 35 individuals of which 20 were males and 15 females. The males are well characterized by their secondary sexual characters, such as the absence of the first abdominal appendages etc., so that we can clearly see that this is a new case of male animals producing in part the female elements, just as in the case of *Orchestia* as found and described by Nebeski (Beiträge zur Kenntnis der Amphipoden der Adria. in »Arbeiten aus dem Zoologischen Institute der Universität Wien, 1880).

As in that case, it is also certain that the eggs do not pass out of the generative organ, since we find no other passage than vasa deferentia through the narrow testicular tube. I think that the eggs atrophy at certain season of the year.

The only interesting point is that here the same germinal band passes uninterruptedly through the whole length of generative organ, producing constantly in the anterior half spermatozoa, and in the posterior half, eggs, showing thus very clearly that eggs and spermatozoa are only modifications of one and the same primitive cells as propounded by Leuckart so long ago (R. Leuckart: Artik. Zeugung in Wagner Handb. d. Physiologie. p. 807) and repeatedly confirmed by many able investigators.

Tokyo, Japan, May 1890.

4. Die Aufrechterhaltung des Genus „Sapphir“.

Von Dr. Lazar Car.

eingeg. 24. Januar 1890.

Im ersten Moment mußte ich wohl die Möglichkeit zugeben und Herrn Dr. Dahl Glauben schenken, daß ich, da ich das Werk »Report on the Scientific Results of the Voyage of H. M. S. Challenger. Zool. Vol. VIII.« mit der Arbeit von Brady nicht besaß, ein Genus aufgestellt habe, welches schon von Brady im Jahre 1883 unter dem Namen *Goniopsyllus* aufgestellt worden war. Aus eigener Überzeugung konnte ich dies jedoch so lange nicht bestätigen, bis ich nicht die Beschreibung und die Abbildungen von Brady zu Gesicht bekommen hatte.

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