

1866. DOHRN, ANTON, born December 29, 1840 (Paul Mayer).

Zur Naturgeschichte der Caprellen. Mit. Taf. XIII. B. Zeitschrift für wissenschaftliche Zoologie. Bd. XVI. 1. Heft. 1866. pp. 245-251.

Dohrn remarks, as Gosse had done before him, that Caprellæ can upon occasion swim with activity. In his account of the nervous system, he says that "the brain mass consists of two large, differently-formed swellings, of which the upper is considerably larger than the lower. The former shows three distinct sections, a larger upper, a central giving off the optic nerves, and a small anterior one. The upper mass is pierced by the two branches of the aorta, the lower by the œsophagus; behind this the broad œsophagean commissures pass obliquely backwards, entering the first mass of the ventral chain, which likewise consists of two coalescent ganglia. The hinder smaller ganglion belongs to the coalescent first peræon-segment and is considerably smaller than the anterior, properly subœsophagean ganglion." Mayer observes that the coalescence here spoken of is true of the genus *Proto*, but in most genera and species of the Caprellidæ, the ganglia in question come together without actually coalescing. Dohrn cannot agree with Frey and Leuckart in the view that the ganglion of the second peræon-segment is more powerfully developed than any other, although he thinks that no doubt the importance of the ganglia depends on the extent of the regions they have to supply. He studied the nerves in the young animal, but as a matter of fact in some adult Caprellæ the second pair of limbs are so greatly developed that the statement by Frey and Leuckart is just in accord with the general principle which Dohrn accepts. Dohrn found that the last peræon-segment and the rudimentary pleon, at any rate in the young animal, were without nerve-masses, but on the other hand he discovered that the last ganglion, in the sixth peræon-segment, corresponded not merely to two coalescent nerve-masses, but rather to five, some of which he naturally supposed were derived from the pleon. Mayer, investigating young animals of *Caprella* and *Protella*, has since seen "behind and between the two strong nerves that run from the seventh peræon-ganglion to the corresponding pair of legs, *no less than seven ganglia*, three pairs and an odd one. The second and third pairs rapidly unite into a single mass, and do not appear to give off any nerves. The last odd one shows traces of coalescence out of an original pair. It is the largest of the pleon-ganglia, and no doubt, as Mayer says, corresponds to the single ganglion which provides in the normal Amphipoda for the three segments preceding the telson.

Dohrn finds only two liver tubes in the Caprellidæ, and therefore concludes that when Spence Bate speaks of the liver in the Amphipoda as consisting of four tubes, it is an error of observation. The number, however, varies in different genera.

In treating of the circulation, Dohrn attributes to the heart five pairs of fissures instead of three. The first, he says, is in the cephalic segment, where the aorta parts from the dorsal vessel; the second, third and fourth lie in the middle of the corresponding segments. The fifth lies in the middle of the fifth segment at the end of the dorsal vessel. The fourth is by far the largest.

In regard to the sexual organs, Dohrn supposes, but erroneously, that there are two pairs of testes in *Caprella*, though in the other Amphipoda he is aware from concurrent testimony that there is but one pair.