

a young animal just escaped from the pouch, though it afterwards disappears. In regard to the use of the apparatus, reference is made to the observations of Leukart [Leuckart] upon the development of the Pupiparæ, showing that the micropyle may have another function than the reception of zoosperms, namely to act as a funnel for the introduction of nourishment. In the case of Amphipods la Valette suggests that it may serve as a respiratory apparatus. He recognises that the outer egg-skin is completely closed, as well as the sack in connection with the micropyle, but he thinks that both might be permeable to the medium surrounding them.

1860. BOECK, AXEL, born 1833, died 1873 (G. O. Sars).

Bemærkninger angaaende de ved de norske Kyster forekommende Amphipoder. Forhandlinger ved de Skandinaviske Naturforskeres ottende Møde i Kjøbenhavn 8-14de Juli 1860, pp. 631-677.

Boeck thinks it likely that the division of the Amphipoda into the three principal groups, Hyperidæ, Gammaridæ, Caprellidæ, will always retain its value, while with growing knowledge the minor subdivisions must be subject to variations. In his own classification he has paid regard, he says, not only to the form of feet and tail, but even more particularly to parts less open to view, the mouth-organs, the marsupial lamellæ and the branchiæ. Besides the characters already in use, namely the presence or absence of palps in maxillæ and mandibles and the number of joints to the maxillipeds, he considers the form of the inner plate in the first pair of maxillæ and its gariture of hairs to be of high importance. He attaches weight also to the arrangement of teeth and hairs at the upper end of the œsophagus, although from the difficulty of the investigation he will not for the time delay over these points. He calls attention to a double armature of teeth which the males of many species possess as opposed to the females, and which he notices especially in the mandibles and first and second maxillæ. This, on which he no longer lays stress in his great work, is no doubt only a misapprehension caused by the appearances which precede the moulting of the Crustacean skin.

In his Classification of the Norwegian Amphipoda Boeck places first the tribe Hyperidæ, Dana, because he considers it to be united by a new and very remarkable form, *Trischizostoma*, to the family Orchestidæ, as well as to the genera *Anonyx* and *Opis* among the Gammaridæ.

In the subfamily Hyperinæ he places "*Hyperia Galba*, Mont. (*Latreillii* Edw.)"; *Hyperia spinipes*, n. s.; *Lestrigonus exulans*, Krøyer, and "*Lestrigonus Boeckii*," n. s. (presumably named after Professor Chr. Boeck), both of which he subsequently united with *Hyperia galba* as synonyms of *Hyperia medusarum*, O. F. Müller.

In the second tribe, Prostomatæ, Boeck, he places the single new genus and species, "*Trischizostoma Raschii*," Esmark and Boeck, in which, however, the genus at least is assuredly a synonym of *Guerinia*, Hope and Costa.

In the third tribe, Gammaridæ, for the first family Orchestidæ, he refers to two genera occurring on the Norwegian coasts, but only makes mention of "*Allorchestia Nilsonii*," Rathke's species which has since been named *Hyale nilssonii*. In the second family, Gammaridæ, he gives the following new species, *Anonyx serratus*, which he afterwards named *Orchomene serratus*; *Anonyx pinguis*, which becomes *Orchomene pinguis* in his later work; *Anonyx obtusifrons*, changed later on into *Menigrates obtusifrons*; "*Anonyx Bruzelii*," dropped out of his later works except for a reference in the Index of De Skand. og. Arkt. Amph., to p. 157, from which it may be inferred that he identified his species with *Anonyx gulosus*, Krøyer; *Ichnopus spinicornis*; *Urothoë norvegica*. He then mentions *Bathyporeia pilosa*, Lindstrøm,