

pyramidal chez les *Cypridina* et *Lysianassa*; claviforme chez les *Isæa*; cylindro-conique dans certains *Squilla*, etc."

1877. HOEK, P. P. C.

Carcinologische Aanteekeningen. Bijdrage tot de Kennis der Noordzee-Fauna (2de Jaarslag, 1877).

No new Amphipoda are reported.

1877. HUXLEY, THOMAS HENRY.

A Manual of the Anatomy of Invertebrated Animals. London, 1877.

The Edriophthalmia are described on pages 359 to 367. "These resemble the *Podophthalmia* in never possessing a greater than the typical number (20) of somites, though, in some members of the group, the body is composed of fewer somites, in consequence of the abortive or rudimentary condition of the abdomen." The genus *Amphithoë* is chosen for special description, but it is not easy to see why this name should have been chosen for the animal figured, which has a large rostrum, the back carinate and almost every segment dentate, the fifth side-plate shorter than the fourth, and the upper antenna showing a secondary flagellum, suggesting, therefore, *Gammaracanthus loricatedus* rather than any *Amphithoë*. The head proper, in Professor Huxley's view, has only five pairs of appendages, the sessile eyes not being counted. These are the antennules, antennæ, mandibles, and two pairs of maxillæ. The first pair of thoracic appendages "are applied against the mouth, and form a large lower lip." "The 'head' of *Amphithoë*, therefore, is formed by the coalescence of the seven anterior somites of the body; but I believe that the tergum of the seventh (or first thoracic) somite is obsolete, as in a Stomatopod, and hence that the tergal surface of the head of the Edriophthalmia corresponds exactly with the cephalostegite (or that part of the carapace which lies in front of the cervical groove) in *Podophthalmia*. Mr. Spence Bate has shown in his valuable 'Report on the *Edriophthalmia*,' that, in the *Crustacea* at present under discussion, a strong apodeme arises on each side from the posterior part of the sternal region of the head, and passing inwards and forwards meets with its fellow, to form an endophragmal arch, which supports the œsophagus and stomach and protects the nervous commissure between the first and second sub-œsophageal ganglia, which runs under it. The discoverer of this structure conceives that it represents the terga of the three somites immediately succeeding the mouth; but I cannot see that it is other than the representative of the precisely similar mesophragm formed by the anterior apodemes in *Astacus*. In fact, the correspondence in structure between the head of an *Amphithoë* and the cephalic portion of the cephalo-thorax of *Astacus* is not a little striking. There is the same sternal flexure, the same relative position of the stomach, and of the insertions of the mandibular muscles. The great difference lies in the abortive condition of the ophthalmic appendages." In treating of the embryology the remark is made that "in certain Amphipods (*Gammarus locusta* and *Desmophilus*) the vitellus undergoes complete division; while, in closely allied forms (*Gammarus fluvialis* and *pulex*), and still more completely in those *Isopoda* which have been studied, the part of the vitellus which divides into blastomeres, becomes more or less completely separated from the rest immediately after fecundation, and the so-called partial yolk division, take place." A note gives a reference to "E. van Beneden, Recherches sur la Composition et la Signification de l'Œuf, 1870." By consulting this work Mr. W. E. Hoyle has found for me the clue to the mysterious