1887. HOLM, TH.

Beretning om de paa Fylla's Togt i 1884 foretagne zoologische Undersøgelser i Grønland; Meddelelser fra Grønland, B. viii, pp. 153–171.

This work is mentioned by Hansen in his "Malacostraca marina Groenlandiae occidentalis," p. 216. Professor Hansen had himself supplied the lists of Crustacea for it, and in his own work takes the opportunity of correcting two names, *Monoculodes norvegicus*, Boeck (pp. 167 and 155), a wrong determination for *Monoculodes simplex*, n. sp., and *Caprella dubia*, Hansen (pp. 168, 157, and 158), which he now describes as "*Capr. microtuberculata*, G. O. Sars, var. *spinigera*."

1887. KOEHLER, R.

Recherches sur la structure du cerveau du Gammarus pulex. (Aus der internationalen Monatsschrift f. Anat. u. Phys. 1887. Bd. IV. Heft. 1.) Avec pl. I. 16 pages. Leipzig.

Microtome sections in various directions through the head of *Gammarus pulex* are described and figured. Since the upper antennæ carry the olfactory cylinders, the nerves which run to them are called, by Bellonci's term, the olfactory nerves. Two groups of cells which extend all along the dorsal face of the brain are designated the upper longitudinal bands; in these one cell is met with of considerable size (la cellule géante). The brain is divided into three regions; the upper including the group of the upper lobes and of the optic ganglia with the cells annexed (cells of the upper bands, of the upper lobes, and the nervous sheath of the optic ganglia), the middle including the median lobes with the median and central cells; the lower including the group of the olfactory lobes and ganglia. The middle region has its two lobes united by a commissural band which separates them from the upper region. In the central region there is a small empty space.

In comparing his own results with Bellonci's description of the brain of *Sphæroma serratum* Dr. Koehler finds that the four cellular groups attached to the upper lobes of the brain of the Isopod (the first containing the giant-cell), have their equivalents in *Gammarus*, but with less distinctness in the grouping. The optic ganglion is constituted by two distinct lobes, but has not the hinder reticulated swelling, which Bellonci found well developed in *Idotea* and rudimentary in *Sphæroma*. As in the Isopods, the nerve destined for the antenna which carries the olfactory cylinders rises in an olfactory lobe to which is annexed a swelling with special structure, besides various cellular groups. The nerve of the lower antenna springs, as in the *Sphæroma*, from the œsophageal commissure, but the group of cells connected with it at its origin is in *Gammarus* above instead of below the point of origin of the nerve. The bundles of fibrillæ coming from the olfactory region form a chiasma in the central region of the brain. These bundles penetrate into the upper, that is to say, the optic region, presenting an incomplete intercrossing, since certain vertical fibrillæ pass directly into the optic region of the same side.

The brain of *Gammarus*, therefore, Dr. Koehler says, appears to come closer to that of the Isopods than to that of the Phronimidæ as described by Claus. "Ce savant a reconnu aussi chez les Phronimides un chiasma central, mais la signification de ce chiasma comme entrecroisement de faisceaux optico-olfactifs, est moins nette que chez les Isopodes et le Gammarus, puisque le nerf olfactif ne parait pas prendre son origine chez les Phronimides dans la même région centrale que chez les autres Edriophtalmes étudiés. La région que j'ai décrite sous le nom de région moyenne ne parait pas exister chez les Phronimides. Le