

He observes that many of the little animals belonging to this family are phosphorescent, as the *Phasmatocarcini* and perhaps the *Amblyrhynoti*, *Erythrocephali*, *Acanthocephali*, &c.

Under the heading *Systematica, Synonymica et Diagnostica* he gives:—

“1. *Classis*: Insecta L., etc., Crustacea Cuv.; Polymeria Goldf.

“2. *Ordo*: Aptera L.; Agonata Fabr.; Decapoda Goldf.; Insecta imperfecta Zenk.

“3. *Familia*: Amphipoda Cuv.; Anthocephala Dumeril; Squillares Goldf.; Gammarinæ (Cervettines) Latreille; Squillæ Zenk.”

For the synonyma he refers to Gronov. *Zooph.*, no. 990. Schwenkfeldt ther. Siles. p. 557. Onomast. hist. nat. vi. 706. Baster (An Gammarus marinus?). Raj. ins. p. 44. Frisch, Geoffroy, Klein, Roessel, Dejeer, Linné Syst. nat., ed. xii. T. v. p. 2992, n. 81. Scopoli, &c. Herbst. Linn. Faun. Succ. 2. 241. Müll. zool. dan. prodr. n. 2366. Blumenbach. Fabric. syst. entom. 1775. Oken, Cuvier le règne anim.; übers v. Schinz. III, 68. Nat. f. Sch., p. 725. Dict. des sciences chez Lévraut xi., 408, and Leach (Gammarus aquaticus) Edinb. Encycl. vii.

He quotes the *diagnosis generis Gammarii* of Fabricius, 1778, Leach (Linn. Transact. xi. 2, 1815), Oken (Naturg. f. Schulen, p. 725), Cuvier le règne anim.; trans. by Schinz), and his own “Antennæ quatuor, anticæ (inferiores) breviores, posticæ (superiores) longiores cum ramo parvo accessorio, utraque articulata. Zenk.,” in which it will be observed that, like Fabricius, he applies the terms *anticæ* and *posticæ* to the lower and upper antennæ respectively (see Note on J. C. Fabricius, 1798). He criticizes with some justice the earlier diagnoses, and gives a brief account of the distinctions between those genera in his *Conspicuum* which he considers to come nearest to *Gammarus*. He then gives the diagnosis of the species “*G. Pulex* Fabr.” by Linné, Scopoli, Fabricius, Oken, Cuvier, Leach, winding up with his own, in which he distinguishes two varieties, $\alphalongicaudatus, $\betabrevicaudatus. In the description he applies the term *femur* (in preference to *cocæ*) to the first joint of the leg. Of the six free joints he calls the first *tibia*, the second *tarsus*, the three following *metatarsus*, the last of these being terminated by an *unguis*.$$

The second section is on the Sanguinis circuitus, as to which his conclusions are not entirely in agreement with modern investigation. He sums up the results of his paper as follows:—

1. For the numerical law in all the external parts of *Gammarus Pulex*, the ternary arrangement is found to be the predominant, the quinary the subordinate. [See p. 13. Totius corporis annuli 3. 5 = 15. a) caput cum collo 3. b) pectus 3. c) abdomen superius 3. d) abdomen inferius 3. e) cauda 3. &c. &c.]
2. The creature has three species of parasites, two internal, in the blood, orange-coloured, surprisingly large in proportion to their host, and one external, louse-like, almost microscopic.
3. The dorsal vessel is rather to be compared with the swim-bladder of fishes than with a heart.
4. There are no special blood-vessels, but the blood flows freely round all the organs in the cavity of the trunk.
5. The globules of the blood are not animated (and therefore are not to be compared with monads). The last statement is in opposition to Mayer, Suppl. zur Lehre vom Kreislaufe, 1827, some of whose statements he quotes with derision.

1833. BOUCHARD-CHANTEREAUX.

Catalogue des Crustacés observés jusqu'à ce jour à l'état vivant dans le Boulonnais. (Soc. d'Agric., du Comm., et des Arts, de Boulogne-sur-mer, années 1831 et 1832. Boulogne, 1833.)

“Il cite les 5 espèces suivantes: *Talitrus locusta* Lmk. *Orchestia littorea* Desm. *Melita palmata* Desm. *Gammarus pulex* Lin. *Proton pedatum* Desm.” (M. Edouard Chevreux *in litt.*)