

description of the Malacostraca, p. 447, "the head includes in all cases, behind the mandibular segment on which two paragnathi form a kind of underlip, the segments of two pairs of maxillæ. The latter preserve more or less the character of phyllopod feet. The head, therefore, consists of five segments, each with its pair of appendages, viz., two pairs of antennæ, one pair of mandibles, and two pairs of maxillæ. It is followed by the thorax, which is composed of eight segments." It may be noticed also that the eyes in some Amphipoda can scarcely be called lateral, and in others are apparently altogether wanting; nor is it quite accurate to say (p. 450) that "the two eyes are always sessile, compound," since in *Ampelisca* they are simple.

At p. 451 the suborder Amphipoda are thus defined:—"Arthrostraca with laterally compressed body, with gills on the thoracic feet and an elongated abdomen, of which the three anterior segments bear the swimming feet, while the three posterior bear posteriorly directed feet adapted for springing."

The plates forming the brood-pouch are here called *oostegites*. "The eggs pass into the brood-pouch and there develop. The yolk sometimes (*G. locusta* and other marine species) undergoes a complete segmentation. Sometimes (*G. pulex*), after a superficial segmentation, a peripheral cell-layer is separated, which develops into a delicate blastoderm beneath the egg membrane. A ventral primitive streak is then formed, and on the dorsal side, beneath a differentiation which has been erroneously taken for a micropyle, a peculiar globular organ makes its appearance; this is the first rudiment of the cervical gland (*dorsal organ*), which is confined to embryonic life. The appendages are developed from before backwards on the ventrally flexed body of the embryo. The young animals usually possess at hatching all their appendages and in all essential points have the structure of the adult animal, but the number of joints of the antennæ and the special form of the legs still present differences. In the *Hyperina* alone the just hatched young may be without abdominal feet, and differ so much in their form from the adult that they may be said to undergo a metamorphosis." The following classification is made:—

"Tribe 1.—Læmodipoda. *Amphipoda with cervically placed anterior legs and rudimentary apodal abdomen.*" "The abdomen is small and reduced to a short protuberance destitute of appendages." This statement requires modification. *Caprella linearis*, L., and *Cyamus ceti*, L., are given as examples.

"Tribe 2.—Crevettina. *Amphipoda with small head, small eyes, and multiarticulate pediform maxillipeds.*" "The coxal joints of the thoracic legs have the form of broad and large epimeral plates. The abdomen has always the full number of segments. The three posterior pairs of abdominal feet (*uropoda*) are well developed and often much elongated." The epimeral plates, however, are not always large, nor are all the uropoda always well developed. Three families are assigned to the Crevettina: the Corophiidæ, in which "the coxal joints of the legs are frequently very small"; the Orchestiidæ, and the Gammaridæ.

"Tribe 3.—Hyperina. *Amphipoda with large swollen head and large eyes, usually divided into frontal and lateral eyes. They have a pair of rudimentary maxillipeds functioning as underlip.*

"The antennæ are sometimes short and rudimentary, sometimes of considerable size, and in the male are elongated into a multiarticulate flagellum (*Hyperidæ*). The posterior antennæ may in the female be reduced to the basal joint enclosing the glandular tube (*Phronima*); in the male, on the contrary, they are folded in a zigzag, after the manner of a carpenter's rule (*Platyscelinæ*). A paired auditory vesicle may be present above the brain (*Oxycephalus*, *Rhabdosoma*)." Three families are assigned to this group, the Hyperidæ, the Phronimidæ and Platyscelidæ. In the description of the family Phronimidæ, the statement "Head large, with projecting rostrum and large divided eye" should rather be "Head large, with projecting snout or muzzle and large pair of divided eyes."