

The greater part of this apparatus constitutes a very large membranous plate of a somewhat navicular form, and curved so as to exhibit an outer convex and an inner concave surface. It terminates in a recurved acuminate lappet, and is furnished along the inner edge with a regular series of lamellar gill-lobules, increasing in size anteriorly, the foremost of which is turned backward. The whole plate is moved in the living animal by an assemblage of strong muscles partly passing from the base of the corresponding maxilliped. Anteriorly another smaller plate is seen extending forwards and forming an imperfect funnel; it tapers to a narrow band-like ligament, and terminates in an indurated lamella armed with six curved setæ, and encircled by a very thin and pellucid border (fig. 13). This terminal lamella, which is distinctly marked off from the plate by a transverse suture, is found projecting in front of the pseudorostral prominence in close juxtaposition to the corresponding one of the other side, and in living specimens both lamellæ are seen performing a peculiar snapping movement, whereby the water is expelled at intervals from the branchial cavities, during the rhythmical strokes of the true branchial plate. Although this anteriorly directed plate would seem to be partly connected at its base with the principal plate, I am still disposed to entertain the assumption I have set forth in another work,¹ that the former is the highly modified exopodite of the maxillipeds, whereas the latter represents the epipodite.

Of the limbs of the trunk the two anterior pairs are closely applied against the oral parts, and do not seem to have any locomotory function, and they may, therefore, properly be termed gnathopoda. These two pairs differ materially from each other both as regards size and structure.

The first pair of gnathopoda (fig. 14) form simple stems, composed of the same number of joints as the maxillipeds, but are rather more slender. The basal part is longer than the terminal and somewhat laminar, with a slight longitudinal keel running along the upper surface and terminating posteriorly in a dentiform projection of the outer edge. This part, as in the maxillipeds, chiefly consists of a single joint (the basal), the coxal joint being very small and imperfectly defined. It is furnished at the end with a rather strong ciliated seta, and has, moreover, a few bristles at the outer part of both edges, those of the exterior edge being larger and about eight in number. The first joint of the terminal part is quite short and somewhat swollen, almost globular, with a single bristle at the end on the outer side; the succeeding joint is a little longer, constricted at the base, and furnished along the inner edge with several ciliated bristles, and a single one at the end exteriorly. The two last joints are rather small, and beset with bristles at the end. At the base of each of these gnathopoda there is affixed, in the adult female of all Cumacea, a lamella edged with very long setæ projecting within the marsupial pouch. This lamella was, however, only slightly developed in the specimens of the present species, owing to their being not full-grown.

¹ Beskrivelse af de paa Fregatten Josephine's Expedition fundne Cumaceer.