

Dr. Boas, viz., that both the exopodite and endopodite take part in the formation of this peculiar apparatus. For in this species it is clearly composed of two different parts, well defined from each other, the posterior part apparently representing the epipodite, the anterior the exopodite. The epipodite forms an irregular, oblong, membranous plate, broadest anteriorly, where it exhibits a freely projecting acute corner, and gradually tapering posteriorly, its extremity forming a lanceolate flap curving anteriorly in the form of a hook. To the inner face of this plate are affixed six digitiform gill-lobules pointing forwards, five of which form a row along a narrow inflexed lamella proceeding from the inner edge, whereas the sixth occurs at about the middle line of the plate. The anterior division of the branchial apparatus, which in my opinion represents the highly modified exopodite, forms an anteriorly directed narrow plate, suddenly constricted in front of the middle to a narrow semicylindrical neck, and terminating in a triangular expanded part, which is found protruding from beneath the pseudorostral projection. The whole of this division only serves as an efferent duct for the water introduced into the branchial cavity, and in the living animal probably does not partake in the rhythmical movements of the epipodal division.

The first pair of gnathopoda (fig. 1, gn^1 ; fig. 7) are rather slender and have the ischial joint distinctly defined, though very small. At the end of the large and somewhat curved basal joint there occur at both edges several strong plumose setæ. The carpal joint is densely setose on the inner edge and considerably larger than the propodal joint, which is slightly dilated at the end, where it is densely beset with bristles. The terminal joint is narrow, conical, and provided with a strong apical spine. At the base of these gnathopoda in the female the usual setose lamella was distinctly developed, though the setæ were still very short and rudimentary.

The second pair of gnathopoda (fig. 1, gn^2 ; fig. 7 *bis*) are, as usual, provided with well-developed natatory exopodites, the terminal part of which is composed of eight setiferous articulations. In other respects the endopodite or stem has much the same appearance as that of the first pair of gnathopoda, though somewhat more elongate and with the basal joint slightly tapering towards the end, and bearing along the inner edge a dense series of strong plumose setæ.

The first pair of legs (fig. 8) are rather slender, and, when fully extended, about as long as the whole anterior division of the body. The basal joint, occupying somewhat more than one-third of the length of the leg, is strongly curved and setose along the whole of the inner edge and the distal half of the outer. The three succeeding joints exhibit a similar relation in length to each other as in the gnathopoda, though somewhat more slender, and only sparingly beset with bristles. The two next joints, on the other hand, are much more elongate, and form with each other and with the preceding joint distinct geniculate bends. The penultimate or propodal joint is considerably longer than the terminal, which is very narrow and linear; both joints are furnished, especially on