

The second pair of gnathopoda is long and robust, reaching beyond the extremity of the peduncle of the first pair of antennæ, and terminating in a small, compressed, curved dactylos; it is thickly fringed with hairs and carries a long, slender basecephysis; like the pereiopoda it has no tooth at the base.

The first pair of pereiopoda is short and moderately strong, and each succeeding pair increases in length and becomes more slender, so that the last two pairs are exceedingly long and slender.

On the ventral surface of the pereion there is an orange-coloured, discoid mass between the coxæ of the fourth pair of pereiopoda, immediately posterior to the extremity of the projecting processes on the third pair of pereiopoda that carry the oviducts, while the surface between, and posterior to the last pair of pereiopoda, is smooth and even as far as the median line between the first pair of pleopoda, where there arises a large, laterally compressed, anteriorly pointed and posteriorly curved tooth.

The first pair of pleopoda is long, slender, and single-branched; a rudimentary membranous petasma exists on the inner side of the basal joint. All the other pleopoda are biramose, the outer or posterior branch being long, and the inner one short; they gradually decrease in length but gain in equality posteriorly. The posterior pair forms the branches of the rhipidura. The outer is much longer than the inner, and the inner is much longer than the telson, and is leaf-like and partly strengthened by a rib in the median line; the outer is ovate, and strengthened by a rib that meets the outer margin considerably short of the distal extremity.

The branchiæ are of generic value, but differ a little in the relative proportions of the several plumes. The pleurobranchiæ are small but increase in size posteriorly, yet the last, although the longest, is not a large or important appendage. The arthrobranchiæ are large and overlap each other, except in the last pair, where there is no podobranchial plume, whereas a long and well-developed podobranchial plume is attached to every mastigobranchia except that which belongs to the penultimate pair of pereiopoda. The mastigobranchiæ are all thick and fleshy, and have the surface marked with numerous straggling hairs.

Thus there are seven pleurobranchiæ, twelve arthrobranchiæ, five podobranchiæ, and six mastigobranchiæ, the tendency of which is to increase in size posteriorly.

About fifty miles south of Japan, just where the water rapidly deepens from a hundred fathoms to between three and four thousand, four specimens were taken; three of them were males, about half the size of the female, and had the eyes in one instance dark brown all over, while in the others the brown pigment affected only the base of the eye, but to a greater extent than in the specimen described. The bottom was green mud, and the temperature was  $2^{\circ}1$  higher than at Station 184. At the eastern entrance of Torres Strait, it was taken with the trawl in a deep ravine between the hundred fathom areas that surround the New Guinea and Australian coasts, being the deepest water in which this species has been taken.