

large mastigobranchial plate. The outer branch consists of two joints, the basal one, which is long, narrow and sub-foliaceous, is fringed on the outer margin, and supports a second joint at its extremity, the plane of which is at right angles to that of the basal joint; this second joint is long, ovate, and thickly fringed with hairs; in its position it rests as an operculum against, and covers the outer and anterior outlet of the branchial chamber: the second or middle branch stands at right angles with the preceding, it is as long as the first joint of the previous branch, strong, foliaceous, and thickly covered with hairs: the third or inner branch is shorter and broader than the preceding, it is concave inwards and convex outwards, delicately foliaceous, and fringed with hairs, most abundantly on the inner margin. The mastigobranchia which is directed posteriorly is as long as the first branch, it is broad, thin, and studded over with numerous long hairs; on the outer margin, near the base, is a small process that may be the abortive rudiment of a branchia.

The first pair of gnathopoda (*h*) is subpediform; it consists only of six joints. The first or coxal joint supports a strong process thickly fringed with hairs, which appears to be an obsolete or depauperised mastigobranchial plate: the second joint or basis supports an ecpysis of two joints, or rather of one joint and a multiarticulate lash fringed with hairs: the third joint is probably the ischium and meros combined, and is tolerably long, three times as long as the basis; it is broader near the base than at the distal extremity, where it articulates diagonally with the next joint, which I consider to be the carpos; it is narrow at the proximal and broad at the distal extremity, where it is fringed both on the inner and outer side with a thick brush of hairs: the penultimate I take to be the propodos; it is narrower at the base than at the distal extremity, where it is thickly fringed with long hairs, and in the centre is deeply excavate, and articulates with the dactylos in the form of a flat ovate plate, tipped with strong hairs.

The second pair of gnathopoda (Pl. VI. *i*) is much larger than the first, and proportionately more slender. It is pediform, and consists of seven joints. The coxa carries a well-formed mastigobranchial plate, that supports a well-formed but not long podobranchial plume; the basis is short, and supports an ecpysis consisting of a single joint, which nearly equals the ischium in length, and terminates in a multiarticulate flagellum; the ischium is three-sided, flattened, the inner and outer margins parallel, the outer smooth, corresponding with the basecpysis, the upper or central is denticulate and hairless, but the lower or inner is fringed with long hairs; the meros is united with the ischium by an articulation, and corresponds with it in form as well as in armature, but is rather longer; the carpos is about half the length of the meros, and articulates with it at the extremity, the inner side is triangular, and has each margin fringed with long hairs; the propodos is of about the same length as the carpos, three-sided, with sub-parallel margins; each side, particularly the inner as well as the margins, is covered with numerous long hairs; the dactylos is of about the same length as the