

upwards so that its orifice, which is protected by a thin membrane, rests against and is inserted into a depression or hollow in the lower side of the first joint of the peduncle of the first pair of antennæ; the second joint supports on the outer distal angle a long, narrow, and pointed scaphocerite fringed with long hairs; the fourth and fifth joints are cylindrical and subequal.

The mandibles (Pl. XVIII. *d*) are large and powerful organs, having a deeply serrate margin surrounding the hollowed or concave psalisiform blade, which is separated into three parts by a tooth between each that is larger and more prominent than the others. The upper and outer surfaces are flattened, and at the base a two-jointed synhipod articulates, which generally lies folded within the hollow under the blade, and is covered with a brush of tolerably long hairs, with which probably it sweeps the contents of the mouth into position for manducation; at the base is a long and powerful apophysis, the internal or distal extremity of which is produced to a right angle, and strengthened by lateral attachment. This projecting process is united to the inner surface of the carapace with which it is connected by two calcified tendons, one of which is on the inner side, just beyond the psalisiform blade, and the other on the outer side, at the extremity of the apophysis: by the aid of these the siagnos or mandibles are opened and shut at will.

The first pair of siagnopoda (*e*) are small, two-branched, and offer no characteristic distinction from those of *Polycheles* or *Pentacheles*.

The second pair (*f*) consists of two small foliaceous rami, fringed with hairs; both articulate with and fold back upon a large foliaceous plate that is fringed with a closely packed row of soft, fine hairs. The mastigobranchia is broad posteriorly, and formed to act as an operculum for accelerating or decreasing the current of water in the branchial chamber.

The third pair of siagnopoda (*g*) consists of a long and foliaceous plate, its extremity extending so far forward as to reach beyond the metope; the extremity is longitudinally folded on itself, and forms a hollow cavity at the inferior angle of which a small triangular foliaceous plate articulates; this plate folds back and falls into the chamber formed by the involution of the larger plate, and thus acts as a movable valve, which during life is probably in constant play in the outgoing current from the branchial chamber, and which it controls. In the hollow formed by the curve of the preceding branch is a narrow and shorter one, lying in contact with its inner wall. The several margins of these foliaceous plates are fringed with a closely packed row of fine hairs; attached to the base, on the anterior surface, is a broad, flat, foliaceous plate, fringed with long hairs, and on the posterior margin is a long and broad mastigobranchial plate that projects back and falls within the anterior opening of the branchial chamber.

The first pair of gnathopoda (*h*) is short, and moderately robust. It consists of seven joints. The coxa is large and robust, and carries no ecphysis or branch of any kind;