

behind them near together stand the three pairs of siagnopoda. These are all distinctly visible in Dr. von Willemoes Suhm's mounted specimens, but finding in the collection one preserved in spirits, that was taken in the Pacific near Fiji, I took advantage of the circumstance to dissect out separately each oral member, and have figured them in the plate (*d, e, f, g*).

The mandibles (fig. 1*d*) are simple, having an apophysis, but neither molar process nor synphipod; the psalistoma is sharp-pointed and serrate.

The first pair of siagnopoda (fig. 1*e*) is three-jointed; the first two joints are broad and foliaceous, and tipped with hairs on the inner margin; the third is cylindrical, short, and tipped with three or four hairs. Milne-Edwards says that the first pair is nearly rudimentary and appears to consist of a small horny scale bordered with cilia. It appears to me, on looking at the figures given by Milne-Edwards, that in his dissection he has broken the appendage in two, and that his figures 6 and 7 put together will, when combined, correspond with my figure (fig. 1*e*), which agrees with the representation of the same appendage given by Anton Dohrn.¹

The second pair of siagnopoda (fig. 1*f*) is three-jointed; the central joint is bilobed, and each is fringed with a cilium on the inner surface; on the outer side is a broad, oval, foliaceous plate that is fringed with hairs radiating centrifugally round the margin, and is the homotype of the mastigobranchial plate of the higher groups of Macrura. This corresponds with Milne-Edwards' third pair, and with the second maxillæ in Anton Dohrn's description. Claus² figures this appendage, representing the three internal lobes much as they are given in my figure (fig. 1*f*), but he represents the outer foliaceous plate as being comparatively small and sparsely fringed with distant cilia; it should be remembered, however, that Claus drew his figure from an older specimen, since he represents it with a seventh pair of pereionic appendages in a rudimentary form.

The third pair of siagnopoda (fig. 1*g*) consists on the inner side of a four-jointed appendage, of which the first or basal joint is broad, foliaceous, and fringed with hairs; the second, third, and fourth joints are narrow, cylindrical, and distally carry a single hair on the inner margin; at the base of the first joint on the outer side is a long and slender biarticulate rod, furnished with cilia at the distal extremity; at the base of this rod there is a large ovate plate, the margin of which is fringed with distant cilia, and near its base stands also a short membranous plate. The inner four-jointed branch I believe to be the representative of as many joints of the typical leg, the outer rod being the basephysis, while the two foliaceous plates represent the mastigobranchia and the rudiment of a branchial appendage in its saccular form. Milne-Edwards' figure corresponds with mine in part only, omitting the two outer plates, which also correspond

¹ Untersuchungen über Bau und Entwicklung der Arthropoden, taf. xv. fig. 3, Leipzig, 1870.

² Crustaceen-Systems, p. 48, taf. viii. fig. 9, 1876.