

DESCRIPTION OF GENERA AND SPECIES.

Order PODOPHTHALMIA.

Suborder SCHIZOPODA.

Family 1. LOPHOGASTRIDÆ.

This family, formerly represented only by a solitary genus, *Lophogaster*, has acquired a very considerable augmentation by the material collected during the Challenger Expedition, three interesting new genera having been added, one of which (*Gnathophausia*) is represented by no less than nine different species.

I have placed this family at the head of the suborder, since it would seem to comprise the most highly organised forms of Schizopoda. This may easily be shown by comparing the structure and development of the several organs with the corresponding ones in other Schizopods, and especially by examining the branchial apparatus, the highly differentiated structure of which gives full evidence of the high rank occupied by these forms. The fact that by far the largest and most powerfully developed species are to be found in the present family, would seem also to support such a view.

The late Professor M. Sars, my father, had already stated that the genus *Lophogaster*, which constitutes the type of this family, exhibits in several respects a striking affinity to some of the lower Macrura (Caridea). Exclusive of the strong development of the gills, may also be noted the structure of the integuments, which are more or less calcified or indurated, and in some cases even exhibit a distinctly perceptible sculpture, not to be found in any other Schizopods; moreover, the comparatively powerful structure of the legs renders those organs apparently more efficient for the office of true pereiopoda, than is the case with the other known forms of this suborder. From the Macrura they may, however, be easily distinguished, not only by the incubatory pouch of the females, but also by the uniformly developed biramous legs, none of which exhibit any trace of a cheliform or even subcheliform structure.

A synopsis of the four genera comprised in this family is given below:—

Carapace	{	covering only the anterior division of the body. Rostrum	{	short, forming together with the supra-orbital spines a broad tridentate frontal plate. Antennal scale	{	broad, cordiform, with the inner edge setose,	<i>Lophogaster.</i>
						narrow, flexuous, without marginal setæ,	<i>Ceratolepis.</i>
				more or less produced, spear-shaped, denticulate,			<i>Gnathophausia.</i>
		covering whole of the anterior division of the body and part of posterior, .					<i>Chalaraspis.</i>