

DESCRIPTIONS OF GENERA AND SPECIES.

Suborder **MACRURA.**

THIS section of the order Decapoda in the Crustacea may be generally defined by the following external characters :—

The animal is elongated and compressed. The carapace is less than half the length of the animal, and is anteriorly produced in the median line and covers the ophthalmic somite.

The ophthalmopoda are not enclosed within orbits, and rest in a hollow in the upper surface of the first joint of the peduncle of the antennæ.

The first pair of antennæ is elongated, and not planted in fossettes.

The second pair is considerably elongated, and carries a foliaceous appendage attached to the second joint.

The second pair of gnathopoda is elongated and pediform.

The pereopoda have seven distinct joints, of which the coxa articulates with the pereion.

The pleopoda consist of biramose appendages, of which the anterior pair varies from the succeeding, and the posterior is associated with the telson and helps to form the great caudal fan or rhipidura, which is the only feature that is invariably constant and common to all families of the suborder.

Variations both in the structure and in the relative importance of parts occur in most organs, in some to a considerable extent, but the passage from one modification to another clearly demonstrates that such changes are of specific or generic value only. This is well shown in some species of *Pentacheles*, where some have the branchial lash (mastigobranchia) large, others small, and in some it is wanting altogether, and this variation occurs in specimens which differ little in external appearance, and which were procured in some instances from the same locality.

One of the most conspicuous variations of structure, and most convenient for examination, is to be found in the branchial appendages. In some genera these organs are developed as a series of leaf-like plates, in others they exist as feather-like plumes of slender cylinders, and again they are found to divide into a series of tree-like branches,