

in a rudimentary condition, and the pereopoda are in their entirety utilised as natatory organs, it is doubtful if the basecephyses be ever used for simply swimming purposes; and, moreover, I think it to be capable of demonstration that in the pelagic Macrura, when these organs are developed, they are mostly employed for ascending and descending through the various strata of oceanic water, and are of importance in enabling the animals to avoid the strong sunlight at the surface, by permitting them to sink during the daytime, and ascend at night, a periodic movement that has been so frequently noticed to be their habit.

2. The large size of the synnhipod attached to the mandibles in many of this tribe is a feature the animals possess in somewhat inferior degree to that which we see in *Lucifer*, *Sergestes*, and other genera of the Penæidea, more especially in *Gennadas* and *Benthesicymus*, where they frequently reach to the extremity of the ophthalmopoda, but the size of this appendage cannot be considered as being a condition illustrative of the tribe, inasmuch as it is absent in the genus *Stylocheiron*, just as we find it wanting in some genera of the Phyllobranchiata.

3. The pereopoda are very variable in form and proportion among the several families of which this tribe is composed, when compared with the more normal forms; and the gnathopoda exhibit a persistent tendency to approach to the pediform condition of the pereopoda, thus illustrating a very constant law that, with the depreciation of the functional power in the pereopoda, the gnathopoda increase in importance. This appears to me to be only a continuation of the same process that is visible all through the Macrura, and which is strongly exhibited in the Sergestidæ, and becomes more exaggerated in the Schizopoda—leading through the Eucopiidæ, in which we find the pereopoda departing from the normal form in this division of the Crustacea, and approximating to those of the Amphipoda, in which the first pair of pereopoda and both pairs of gnathopoda are subchelate. To carry the similitude further, all the somites of the pereion in *Eucopia* complete their dorsal arc as in the Amphipoda; the carapace being only a thin and membranous cloak that loosely overlaps the pereion.<sup>1</sup>

4. The mode by which the ova are carried by the females in the Schizopoda varies. In the Euphausiidæ it corresponds with that of *Lucifer*, and may be the same in the Penæidæ also, but I am inclined to believe that the weight of evidence is in favour of the belief that the ova in the normal group are deposited in the open waters of the ocean. In other families of the Schizopoda they are supported in pouches of different kinds, developed for the purpose beneath the pereion, similar in kind but varying in different genera, like those of the Edriophthalmous Crustacea, or they are carried in sacs as in Entomostracous forms. In the Euphausiidæ, moreover, the males possess a petasma attached to

<sup>1</sup> *Apseudes talpa*, Montagu, appears to approach nearer to this tribe than to the Normal Isopoda. It only wants the extension of the cephalon into the form of a carapace to give it all the characters essential to a perfect Macruran.