

apart from all the rest. The Lysianassidæ are set apart in another direction by the peculiarities of the upper antennæ, the second gnathopods, and especially that character of the mandibles, on account of which Schiødte has named them the Trochalognatha. As far, however, as the antennæ are concerned, they are united to Schiødte's other group, the Eleutherognatha, by the new family Valettidæ. The Stegocephalidæ, while agreeing with the Lysianassidæ in the upper antennæ, are less remote from *Gammarus* in the form of the second gnathopods. On the other hand, the character of the mandibles shows a further departure from the common type than is found anywhere else among the Gammarina. Hence a common ancestry may be supposed for these three families, branching off from *Gammarus* at a remote period.

In the Stenothoidæ the genus *Stenothoe* itself, being without the mandibular palp, may be regarded as a later form than the companion genus *Metopa*, in which that palp is retained. In the Leucothoidæ the genus *Leucothoë*, by the characters of its mandibles and maxillipeds, seems to lead up to the Stenothoidæ.

The Syrrhoidæ and Synopidæ on several accounts may plausibly be placed side by side. In one particular, the very short terminal joint of the mandibular palp, these families show an affinity to the Stenothoidæ; but apart from this one point their affinities are with the Pontoporeiidæ. Nearer than any of these to *Gammarus* stand the Ædiceridæ.

The Iphimedidæ, Pardaliscidæ, and Amphilochidæ remain, with peculiarities that make every suggestion for their classification hazardous. At a venture the Pardaliscidæ may be grouped with the Syrrhoidæ, Synopidæ, and Pontoporeiidæ; the Iphimedidæ with the Pleustidæ and Epimeridæ; and lastly, the Amphilochidæ left, where they are usually placed, in a somewhat dubious proximity to the Stenothoidæ.

Between the Gammarina and Hyperina there is a wide gap, over which at one point no bridge has yet been found, for, while in the Gammarina the maxillipeds always have a palp, they never have one in the Hyperina. In the Gammarina the mandibular palp has, with the rarest exceptions, a short first joint, whereas in the Hyperina this joint is frequently of great length, but here there are all sorts of connecting links, the mandibular palp in *Cyllopus* being quite of the pattern common among the Gammarina. Milne-Edwards, in 1840, when establishing the Tribu des Hypérines Gammaroides, went so far as to say that the single genus, *Vibilia*, which he placed in it as a link between the Gammarina and the ordinary Hyperina, might almost as well stand in one division as the other. To this overstatement of the closeness of the tie between the two groups he was no doubt led by wrongly supposing that *Vibilia* had rudimentary palps to the maxillipeds.

Within the Hyperina, although marvellous diversity of form has been arrived at, there is comparatively little difficulty in tracing a family resemblance between the different sections. Naturally the Platyscelidæ or Hypérines anormales, with their strange zigzag