

limbs only present, the anterior (antennulæ) simple, the two others (antennæ and mandibular legs) biramous, natatory.

2. *Metanauplius Stage*.—Form of body as in the Nauplius stage. Two pairs of limbs (antennulæ and antennæ) only developed; mandibular legs lost. Mandibles, maxillæ, and maxillipeds present merely as bud-like prominences.

3. *Calyptopis Stage*.—Body divided into its two principal divisions. Carapace distinct, forming anteriorly a hood-like expansion. Tail becoming segmented. Compound eyes still imperfectly developed, immobile, and covered over by the carapace. Mandibles, maxillæ, and maxillipeds distinct, but no trace of legs or pleopoda. Uropoda becoming developed.

4. *Furcilia Stage*.—Compound eyes more fully developed, mobile, and projecting beyond the sides of the carapace. Antennæ still retaining their original structure, natatory. Anterior pairs of legs and pleopoda successively developing.

5. *Cyrtopia Stage*.—Antennular flagella becoming elongate and distinctly articulate. Antennæ transformed, so as not to serve the purpose of locomotion. Posterior legs and gills successively appearing.

6. *Post-Larval Stage*.—All the legs developed. Telson assuming its definitive form and armature.

The difficulty attending an accurate reference of the numerous larval forms contained in the Challenger surface gatherings to the several species described above has been very great. However, by carefully examining all the forms, and comparing one with the other, I have nevertheless been enabled to trace out the development, more or less completely, in four different species belonging to as many genera. In the following pages I purpose describing the several stages of each species in detail.

EARLY LARVAL STAGES OF NYCTIPHANES AUSTRALIS, G. O. Sars (Pl. XXVIII.).

The larvæ treated of here I have felt warranted in referring to the above-named species, taken, as they were, from precisely the same bottles as the adult specimens of this form, and from localities where no other Euphausiidæ were obtained. Moreover, as stated above, two of the adult females were ovigerous, whence it may be inferred that hatching time was about to commence. From this cause, apparently, no older larval stages than those here described were found in the jars.

Metanauplius Stage (figs. 1-3).—This is the earliest stage known to the author, and that, it would seem, immediately succeeding the true Nauplius stage. It was represented by a solitary specimen, which measured only $\frac{1}{2}$ mm. in length.

The body is oval in form and does not exhibit the slightest trace of segmentation, nor any distinct limitation of the two principal divisions, so well defined in the adult animal.

The carapace is, however, distinctly indicated even at this early stage, forming, as it