form branchial legs in *Nebaliopsis* and the thoracic legs of any Schizopod or other Malacostracan. In both these genera, however, these limbs are constructed upon the same general plan, the chief agreement being found in their adaptation for solely respiratory purposes, and in so far they very materially differ from the thoracic legs in the Malacostraca. In *Nebalia* the branchial legs hold an intermediate position and consequently exhibit the most typical structure, whereas in the two above named generic types they represent, as it were, the extremes of a series of modifications, apparently standing in some connection with the very different conditions of life in the two, the one being a shallow-water form, the other a very marked deep-water form. That these limbs in *Nebalia* are much more closely related in structure to the branchial legs in other Branchiopoda, than to the thoracic legs in the Malacostraca, cannot in my opinion be disputed. It is true that they somewhat differ from the branchial legs in the Phyllopoda by the want of the so-called endites or lateral lobes of the endopodite. But it must be remembered, that these endites are only peculiar to the Phyllopoda, whereas in other undoubted Branchiopoda, as the Cladocera, they are more or less completely obsolete. Nor can it properly be adduced in support of the assumption of the nearer relationship of *Nebalia* to the Schizopoda, that the "thoracic" legs in the former exhibit the same principal parts as in the latter, since these parts, viz., the endopodite, exopodite, and epipodite, may easily be distinguished in Crustacea belonging to very different groups, and in most other Branchiopoda are quite so well definable as in *Nebalia*. The number of these limbs in all the known recent Phyllocarida is eight pairs, and if we consider the anterior pair as homologous with the maxillipeds in the Malacostraca, the number will certainly answer to that of the thoracic legs in these Crustacea, whereas their number in other Branchiopoda is very variable and at least in the Phyllopoda is much greater. But on closer examination we shall find that the anterior pair of branchial legs in the Nebaliidæ evidently belong to the trunk and not to the cephalic part, as do the maxillipeds in all the known Malacostraca, and even in the Euphausiidæ, where the maxillipeds are constructed upon the very same type as the succeeding legs, the development shows them clearly to belong to the head and not to the trunk.[1] It thus results that the maxillipeds are wanting in the Nebaliidæ, and that the number of the limbs belonging to the trunk is in reality greater than in the Malacostraca. In the Copepoda these limbs are only represented by the so-called maxillipeds, which according to the suggestion of Professor Claus may properly be regarded as the outer and inner branches of a single pair of limbs.

Homology of the Pleopoda and Caudal Limbs:—The great agreement both in form and composition between the two posterior divisions of the body in the Nebaliidæ and the so-called "thorax" and "abdomen" in the Copepoda, has been stated above. This agreement becomes still more evident by a comparison of the respective appendages.

[1] See my Report on the Challenger Schizopoda, Zool. Chall. Exp., pt. xxxvii.