The third and fourth types show their inferiority to the second, by the absence of a series of abdominal appendages; and the fifth a lower state still, in the absence of both thoracic and abdominal legs. The more degraded Macroura (certain Mysidæ) show a transition in this obsolescence of abdominal organs to the third type.

Some of the conclusions from these facts are the following.

I. Each type corresponds to a certain system of force, more or less centralized in the organism, and is an expression of that force,—the higher degree being such as is fitted for the higher structures developed, the lower such as is fitted for structures of inferior grade and size. In other words, the life-system is of different orders for the different types, and the structures formed exhibit the extent of their spheres of action, being such as are adapted to use the force most effectively, in accordance with the end of the species.

II. In a given type, as the first, for example, the same system may be of different dimensions, adapted to structures of different sizes. But the size in either direction for structures of efficient action is limited. To pass these limits, a life-system of another order is required. The Macroura, as they diminish in size, finally pass this limit, and the organisms (Mysidæ, for example) are no longer perfect in their members; an obsolescence of some parts begins to take place, and species of this small size are actually complete only when provided with the structure of a Tetradecapod.

The extreme size of structure admitting of the highest efficient activity is generally three to six times lineally the average or mean typical size. Of these gigantic species, three or four times longer than the mean type, there are examples among the Brachyura and Macroura, which have all the highest attributes of the species. There are also Amphipoda and Isopoda three inches in length, with full vigorous powers. Among Entomostraca, the Calanidæ, apparently the highest group, include species that are three lines long, or three times the length of the mean type.

III. But the limit of efficient activity may be passed; and when so it is attended with a loss of active powers. The structure, as in the female Bopyrus and Lernæoids, and the Cirripeds, outgrows vegetatively the proper sphere of action of the system of force within. This result is especially found in sedentary species, as we have exemplified in our remarks on the Cirripeds.