for by its progress we should never reach the Macroural structure; nor, in the reverse order, should we from the Macroural reach the Brachyural structure. In the remarks above, we speak only of the comparative actual conditions of the species as regards centralization.

The Macroura and Brachyura belong to subordinate, yet correlated types of structure, each perfect in itself, and admitting of wide modifications, and having its own system of degradations. We add a few words on these degradations among the Macroura. We have seen that, in the Brachyura, the powerful prehensile legs are those of the *first pair*, these acting for the collection of food, and so contributing to the mouth. In the Macroura, there are species of high rank that have the anterior legs strong-handed, like the Macroura. There are others, in which the second or third pair is the strong-handed pair; others having all the legs weak appendages, with only rudimentary hands or none. The several marks of degradation are as follows:—

*First.* The outer maxillipeds pediform.
*Second.* The maxillipeds next anterior pediform.
*Third.* Second pair of legs cheliform and stouter than the first.
*Fourth.* The third pair of legs cheliform and stouter than either of the preceding.

Thus as we descend, we find one and even two pairs of mouth appendages beginning to pass from the mouth series to the foot series, and the cephalic portion is thus losing its appendages and high centralized character. Moreover, the power belonging to the first pair of legs in the higher species is transferred to the second pair of legs, as in the Palæmons; or, to the third pair, as in the Penæidæ; indicating a further decrease of that centralization so remarkable in the Brachyura. Still lower among the species, as in the Sergestidæ, all the legs are weak, and the posterior pair may be short or obsolete,—the same deterioration that occurs in the lower Brachyura.

As we descend farther, there is an increased obsolescence of organs, and every step is one of marked imperfection as well as degradation.

*Fifth.* The branchiæ become external and small.
*Sixth.* The branchiæ become wholly wanting, or part of the abdominal appendages.
*Seventh.* The last two pairs of thoracic legs become obsolete.
*Eighth.* The abdominal appendages become obsolete.