

a slight transformation of some Entomostraca—an obliteration of the legs and substitution of locomotive ciliæ—would almost turn them into Rotatoria.

In the classification which has been developed, we have made out *five* primary types of structure among Crustacea. A grand distinction has been shown to consist in the different degrees of cephalization of the normal Crustacean structure. The consecration of *nine* annuli, out of the fourteen cephalothoracic, to the senses and mouth, distinguishes the highest type; of *seven*, the second type; of *six* or *five*, the third and fourth; of *five* or *four*, the fifth. In connexion with other distinctions in these types, we find that they correspond to structures of different size, the size being directly related to the grade. These particulars may be tabulated as follows:—

	Typical number of cephalic annuli.	Mean normal length, in twelfths of inches or lines.
Type I. PODOPHTHALMIA } Subtype I. Brachyura, } or DECAPODA, } II. Macroura, }	9	{ 24 (and breadth, 24). 36 (and breadth, 6).
Type II. TETRADECAPODA,	7	6
Type III. ENTOMOSTRACA,	6-5	1
Type IV. CIRRIPIEDIA,	6-5	1
Type V. ROTATORIA,	5-4	$\frac{1}{9}$

The first type is alone in having true thoracic branchiæ, and pedicellate eyes.

The second type has branchial sac-like appendages, either abdominal or thoracic, and sessile eyes.

The third type has generally no branchiæ, the surface of some part or all of the body serving for aeration. A few species, however, are furnished with special organs for this function. This is, however, no mark of superiority in such species, for they occur even in the Limuli, among the lowest of the Entomostraca. The necessity of them in this case arises from the abnormal size of the species, both the mark and occasion of its inferiority; for the system is thus too large for the mode of surface aeration, found among ordinary Entomostraca; moreover, the shell, which so large an animal possesses and requires for the attachment of its muscles and its movements, is thick and firm, and this is inconsistent with aeration by the exterior surface of the body. The same remarks apply to the liver glands, which are very small or wanting in the small species.