

of the Ctenophoræ is a Cyclopean structure, resulting from the central combination of the several eye-specks occupying in other types of the class a peripheric position at the end of the ambulacral zones. The whole structure of Radiates, however, is so remote from that of the other branches of the animal kingdom, that any attempt to homologize their functions beyond the respective limits of the primary types is more likely to lead to errors than to explain their peculiarities.

Having thus described our *Idyia*, the question now arises, What are its specific characters? for, if the views I have advocated in the first part of this work are at all well founded, it must be obvious that I have embraced in this description many features which are in no way specific. The fundamental structure of our *Idyia*, as composed of eight spheromeres, is not a specific character, since it is common to all the Ctenophoræ; nor are the equable development of the spheromeres and the ramifications of the ambulacral tubes specific characters, since all the true Beroids agree in this respect; nor is the absence of tentacular tubes and of tentacles a specific character, since no member of this sub-order has them; nor is the great width of the digestive cavity, nor the limited extent of the main chymiferous cavity, specific, since all the Beroids agree in the development of these parts; nor is the structure of the ovaries and spermaries, nor that of the circumscribed area. But, instead of enumerating anew all the structural details mentioned in this section, I may as well at once express my conviction, that no structural peculiarity can ever be considered as a specific character, since the essence of species does not lie in the plan of structure, nor in its mode of execution, nor in its complication, nor in the combinations which determine the form, nor even in the details of the structure. These categories of structure determine respectively the branches, the classes, the orders, the families, and the genera of the animal kingdom; while the species are characterized by their size, the relative proportions of their parts, their ornamentation, their geographical range, their relation to the elements in which they live, their mode of existence, the duration of their life, their association with one another, the period of their reproduction, the changes they undergo during their life, and their association with other beings. Considering, now, our *Idyia* in this light, I may say that its most striking specific peculiarities are its great size; the prominence of its vertical diameter; its equable and gradual widening from the abactinal pole toward its middle height, and its still more gradual tapering toward the mouth; its light rosy color, intensified with age, and particularly bright about the sexual organs, and deep pink upon the spermaries during the season of spawning, the color growing deeper in consequence of the accumulation of pigment cells. This species lives along the coasts of New England, and northward: it is found near the shores, and, though sometimes appearing in immense numbers, it cannot be said to lead a gregarious life and to form shoals, as they do not move together,