

bilateral symmetry of the Ctenophoræ even more conspicuous, and certainly more perfect, than in most Echinoderms, notwithstanding the presence of an odd zone in these; for as soon as the anterior extremity of the body assumes prominence by its specialization, the sides recede, as it were, to a lower relation. But in Echinoderms there is no such specialization of the anterior extremity: the structural progress of this class over the Acalephs consists only in the introduction of an odd zone. This zone is mostly identical in structure with the lateral zones, and scarcely ever so far differentiated as to give preponderance to the sides in the general configuration of the body. In Ctenophoræ, on the contrary, the absence of an odd spheromere, combined with the identity of development of the anterior and of the posterior pairs, and the differentiation of the two lateral pairs, including an additional, interambulacral chymiferous tube, throws the whole weight of the extreme structural differences of the spheromeres upon the sides, in such perfect balance with reference to the antero-posterior diameter, that the reciprocal action of the most important function in the life of these animals is to be traced in the alternate contractions of the two sides of the body. Again, the opposite poles of the main axis are strikingly contrasted: at one end we find the mouth or actinostome, and at the other end the circumscribed area, and in an asymmetrical relation to it, the two discharging openings of the chymiferous system. The curves of the sides contribute also to render the contrast between the actinal and abactinal poles more prominent. Thus, in Ctenophoræ the opposite ends of their three diameters are evenly balanced, presenting identical parts in antitropic relations on the anterior and posterior sides and on the lateral sides of the body, and heterogeneous parts in similar relations on opposite poles.

As in all Radiates, the body of the Ctenophoræ is a spherosome; that is to say, it is essentially radiated in its structure, and as in all Acalephs it consists of cells, and of cells only, variously combined and of a variety of forms. There are no specialized tissues in it. The distinction of a muscular system, as described in my former papers upon Acalephs, was a mistake, as will be shown hereafter, arising from the peculiar constitution of the motory cells; nor is there a distinct nervous system. The whole bulk of the body is made up of large contractile cells, and is covered with epithelial cells, which also line the digestive cavity and the system of chymiferous tubes arising from its abactinal prolongation. The thickness and form of the spherosome vary in different families; the size and form of the digestive cavity, and the mode of ramification of the system of chymiferous tubes, also exhibit striking differences: but all Ctenophoræ agree in this, that the spherosome has a uniform structure, being made up of a continuous mass of large motory cells, combined into distinct systems, bearing definite relations to the various and complicated motions of the different parts of the body. The assumption of Mertens,