

way, as already mentioned. Again, the great strength of the oral system determines the very extensive and powerful contractions of the mouth, and, no doubt, is most active when these animals divide too large a prey.

The slight difference already noticed in the development of the spheromeres is also observable in the extent of the rows of locomotive flappers, and though all terminate at a considerable distance from the abactinal pole, the lateral pairs approach it a little more than the anterior and the posterior pairs; so that the figure circumscribed by their abactinal termination coincides with the outline of the body as seen from that side (*Fig. 3*), and overlaps but little the outlines of the digestive cavity as it appears in the same view. On the actinal side the eight rows terminate at the same height, tapering and narrowing gradually as they approach the mouth, and extending nearer to it in proportion as the animal is older. In the largest, the space on the actinal side not occupied by the locomotive flappers is about one sixth of the vertical diameter, and, in young specimens, about one half. In the smallest specimens that may be seen with the naked eye the locomotive flappers do not occupy one third of the height. As the animal grows larger, the rows of locomotive flappers not only extend farther and farther toward the mouth, but the ambulacral zones become also more prominent and more distinct, not only owing to the growth of the ovaries and spermaries, but also in consequence of the appearance of a larger and larger number of pigment cells in the epidermal layer. At first these are few, far apart, and rounded in form; but gradually they become more numerous, acquire the stellate or branching, and sometimes highly ramified, appearance (*Pl. II. Fig. 17*) characteristic of ordinary pigment cells, varying in color as well as in form. In younger specimens these cells are of a pale yellowish tint, but become more rosy afterward, and those of the adult assume gradually a deeper pink. Now such cells are clustered in larger number upon the spermaries, where they have the deepest color, and, as they extend beyond the locomotive flappers (*Pl. II. Fig. 17*), seem to reach the very margin of the mouth (*Pl. I. Figs. 1, 2, 4, and 9*).

As in all Ctenophoræ, the locomotive flappers consist of combs arranged in rows along the ambulacral tubes; but what is peculiar in the genus *Idyia* is, that the combs taper very suddenly toward the abactinal pole (*Pl. II. Figs. 14 and 18*), while on the actinal side they narrow very gradually, and disappear so insensibly as to be lost like a thread among the pigment cells (*Pl. II. Fig. 17*). Owing to the steady and slow motion of this animal, it affords the best opportunity to watch the play of the flappers. It may be seen, in *Figs. 1, 2, and 3* of *Pl. I.*, that the locomotive flappers project beyond the general surface of the spherosome, and also that the waves formed by the flappers along one and the same row when they move successively may be quite distinct (*Fig. 1*), while at other times they seem