

to move all together (*Fig. 2*). The appearance of the flappers themselves when in different states of expansion and contraction also varies greatly, and hence the different aspects of *Figs. 1* and *2* in Pl. I. and Pl. II., though they represent identical attitudes, *Fig. 1* of Pl. I. corresponding to *Fig. 2* of Pl. II., and *Fig. 1* of Pl. II. to *Fig. 2* of Pl. I. Magnified figures (Pl. II. *Figs. 4, 5, 11, 12, 13, 14, 15, 16, 17,* and *18*) illustrate these differences still more clearly. In a state of rest, or during slow progression, the combs have their cilia nearly straight (*Fig. 11*), and bent toward the actinal side of the body. When raised into action they curve, gently if the motion is moderate (*Figs. 13* and *15*), and more strongly if the action is more energetic (*Figs. 12* and *16*).

The relations of the locomotive flappers to the ambulacral tubes and to the ovaries and spermaries are more easily traced in our *Idyia* than in any other Ctenophoræ I have seen. Facing the surface (Pl. I. *Fig. 3* and Pl. II. *Fig. 4*), nothing can be more evident than that the pouches on the two sides of the ambulacra are not identical, and also that identical pouches are never on the same side of adjoining ambulacral tubes; for pale pouches face another in *Fig. 4*, and both are ovarian sacs, while those on the other side of the ambulacral tube, the spermatie pouches, are almost entirely concealed by the crowded deep pink pigment cells. Now the same parts seen in profile (Pl. II. *Fig. 13*) show the undeveloped sexual pouches to be diverticula of the ambulacral tubes, which retain the same relations to the chymiferous tubes and the locomotive flappers after they have completed their growth and are full either of spermatie particles (*Fig. 11*) or of eggs (*Fig. 16*). This close connection of the sexual organs with the ambulacral tubes and the locomotive flappers is one of the most interesting features of the structure of the Ctenophoræ, because, in my opinion, it shows the close homology which this apparatus presents with the ambulacral system of Echinoderms, and especially with that of the Crinoids with their egg-bearing pinnulæ upon the sides of the ambulacral rows.

There is hardly any thing among *Acalephs* equal in beauty to the iridescence of the locomotive flappers of our *Idyia*, playing with all the colors of the rainbow between the rosy edges of its ambulacral zones. Beyond the rows of locomotive flappers on the abactinal side, eight narrow bands (*Fig. 3*) may also be seen extending to the base of the central eye-speck. These bands consist of slight, immovable projections accompanied by pigment cells. Those extending from the anterior and posterior pairs converge toward the sides of the circumscribed area, which they follow to the eye-speck, while the lateral ones extend straight to the same point. The course of these bands to the very base of the central eye-speck is well shown in our *Idyia* (Pl. II. *Figs. 3, 8, 9,* and *18*), and more easily traced than in *Pleurobrachia* and *Bolina*.

The circumscribed area forms a prominent feature of the abactinal pole, being